

CENTRAL BANK OF THE REPUBLIC OF ARMENIA

FINANCIAL STABILITY REPORT

2015

2016

This Financial Stability Report presents an assessment of potential risks that could threaten the stability of financial system of the Republic of Armenia as well as the capacity of the financial system to absorb such risks.

More detailed information on Armenia's macroeconomic environment and financial system analyses is available in the Central Bank's periodicals, such as Status Report on Monetary Policy Implementation and Armenian Financial System: Development, Regulation, Supervision.

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Financial stability can be characterized as concurrence of financial and macroeconomic conditions when the financial system, i.e. financial institutions, markets and market infrastructures are capable to withstand probable shocks and instability, in this way minimizing the probability of interruption of intermediation function.

In defining the financial stability, what is taken into consideration is that financial instability can emerge as a result of interruption of internal functions of the financial system as well as unfavorable developments in domestic and world economies, credit risk issues connected with major borrowers and lenders, shifts in economic policies and infrastructures.

Maintaining the financial stability involves efforts for identifying main risk sources, poor-managed financial risks, ineffective asset pricing and, finally, implementation of the policy as appropriate.

PREFACE

The Financial Stability Report of the Central Bank of the Republic of Armenia is prepared on a semiannual basis. It contains a broad assessment of risks that could threaten the stability of financial system as well as the capacity of financial system to withstand such risks. Through publishing information concerning a variety of reviews on financial stability, the Central Bank seeks to bring interested parties' attention to those risks and events that could undermine financial stability of the Republic of Armenia as well as provide an opportunity to debate on how to minimize such risks.

The Central Bank has a task to maintain the stability and functionality of the financial system of Armenia. The Central Bank's statutory responsibility for the country's financial stability is directly related to its primary goal of price stability. Disruptions in the financial sector may create impediments to effective implementation of monetary policy and long-term and stable economic growth. At the same time, the monetary and macroeconomic stability contributes to the minimization of risks threatening financial stability. The financial sector plays an important role in overall economic system, and the financial sector needs to maintain continuity and sustainability of processes thus contributing to the normal growth of the entire economy.

The Central Bank carries out an ongoing monitoring and analysis of financial stability for early disclosure of any changes and variations that could threaten financial stability. The report refers to the risks revealed in macro-environment and financial sector and their influence on the developments in all sectors of the economy and financial system.

Risks affecting financial stability of Armenia can emerge in the domestic economy, external economy and the financial sector itself. In this sense, the main preconditions for financial stability are:

- favorable developments in global economy and international financial markets,
- sound domestic macroeconomic environment whereby households and companies are creditworthy enough,
- effective financial system with risks that are prudent and manageable,
- financial infrastructures with operational continuity to the benefit of the financial system functioning.

Based on the abovementioned facts, risks that can potentially undermine financial stability of Armenia are presented in this report as follows:

- risks derived from developments in global economy,
- risks derived from developments in macroeconomic environment of Armenia,
- risks derived from developments in financial market of Armenia,
- risks derived from financial institutions of Armenia,
- risks derived from financial infrastructures of Armenia.

The report addresses the risks revealed in those areas and measures their possible impact on the developments in the economy overall and all parts of the financial sector. The report mainly focuses on the risks to the banking sector and development

trends: assets of commercial banks account for almost 90 percent of entire financial system assets. Therefore, the banking sector stance mainly determines overall financial stability and development trends.

ABSTRACT

In 2015, the financial system of Armenia faced a number of shocks transmitted from external economy.

In 2015, the financial system of Armenia faced a number of emergent shocks transmitted from external economy. This has negatively affected the stability of financial markets and the growth pace of banking sector indicators. Due to mutually agreed actions of the Central bank of Armenia and Armenian government, the situation was quickly stabilized in the first quarter of the year and measures were taken in order to subsequently mitigate risks.

The persistent low level of global economic growth may boost the likelihood of risks materialization.

In 2015, the decline of base metals' prices in international markets, the dollar value of exports from Armenia, domestic consumption as well as foreign investments continued. Given the geopolitical developments, the economic growth of Russia weakened, which in turn negatively affected the volumes of inflow of private remittances to Armenia and exports to Russia.

Monetary authorities kept on implementing accommodative policies to stimulate economic growth; the prospect of rising interest rates continues to be considered risky for the global economy.

In 2015, the recovery of global economic growth was slower than assessed before, resulting in several downward overviews of economic growth. Though high economic growth was registered in the US, the economic growth in the euro area countries was lower-than-expected, while the declining trend of economic growth rate in emerging market economies persisted. The abovementioned changes resulted in a cut of world trade and lower prices of some commodities.

Monetary authorities of developing and developed countries carried out expansionary monetary policy to support economic growth. The capital outflow from emerging countries continued causing domestic currency depreciations. During the year, interest rates of monetary policy remained at low levels, while the Federal Reserve hiked its benchmark interest rates in December 2015.

Economic developments in Armenia's main trade partners, some countries of the European Union and Russia (for details, please see box "Economic developments in Russian Federation"), have been unfavorable, and their negative impact on the domestic economy persists (for details, please see section "Developments in the global economy").

In 2015, economic growth in Armenia was 3.0% (3.4% in 2014). The main contributors to the growth were higher-than-forecasted increases of agriculture and industry (for details, please see section "Macroeconomic environment developments in Armenia"). The relatively expansionary fiscal policy of the Armenian government and considerable easing of monetary conditions by the Central bank of Armenia contributed to economic activity, thus mitigating the negative effect of the decline of private spending and private investments.

The lending to economy reduced caused by persistent risks to economic growth stabilization and fall in private remittances. In the period under review, the regulatory requirement of total capital adequacy and liquidity has grown, due to decline of risk weighted assets, capital growth and drop in lending.

Though on an upside track, risks in the financial system remain manageable in terms of financial stability (for details please see sections “Stability of financial institutions of Armenia” and “Financial market infrastructures stability”).

The banking lending is mostly conditioned by low demand for credit resources and current economic uncertainties.

1. DEVELOPMENTS IN THE GLOBAL ECONOMY¹

1.1. MACROECONOMIC ENVIRONMENT

The challenges and concerns about global financial stability expanded in 2015. The key risks to global economy were low inflation in advanced economies, uncertainties about rebalancing of China's economy, as well as falling commodity and oil prices. The latter is having a larger negative impact on commodity- and oil-exporting countries and a smaller positive impact on many importing countries.

Global conditions have improved overall, although developments have been uneven: there has been some progress in the euro area; in the US, the economy has grown robustly, while in emerging markets, financial conditions have been tightened on the back of slower economic growth.

Some improvement was noted in the financial stability of developing countries in the near term. A sustained recovery in the euro area and continued robust activity in the United States are positive forces for financial stability. Long-term prospects remain subdued, reflecting unfavorable demographics, weak productivity growth, and high unemployment, which remain on the agenda. Emerging market vulnerabilities remain elevated, reflecting China's transition toward consumption-driven sustainable growth, a weaker commodity market outlook and geopolitical tensions.

Low growth prospects differ considerably across countries, while financial market volatilities have grown.

Economic developments in China, dilemmas faced by the US Federal Reserve (Fed) and sluggish global trade growth were major concerns that policy makers around the world have been grappling with.

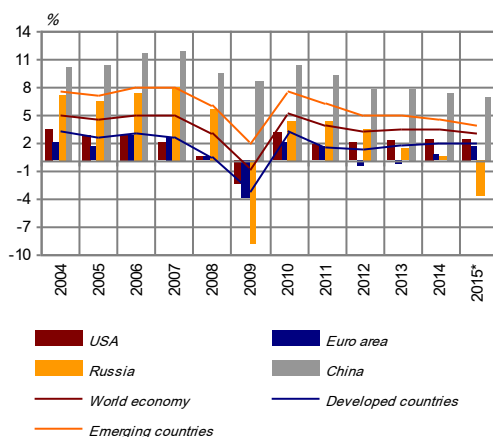
In 2015, the global economic growth remained low at 3.1 percent, according to the IMF (3.4% in 2014). It is the fifth consecutive year of the drop of economic growth in emerging markets and developing countries, while advanced economies faced a slight economic recovery.

Three key transitions continue to influence the global outlook:

1. The gradual slowdown of economic growth and structural reforms of economic activity in China away from investment and manufacturing toward consumption and services,
2. Lower prices for energy and other commodities,
3. A gradual tightening of monetary policy in the United States in the context of a resilient US recovery, while several other major advanced economy central banks continue to ease monetary conditions.

Positive trends and expectations inherent to the previous year did not persist in 2015.

Regional economic growth rates



*Indicators marked by asterisk in this chart and the ones following thereafter are the IMF estimates (April 2016).

Source: IMF.

¹ International developments and predictions are based on information taken from IMF, World Bank, Economist Intelligence unit, Financial times, Bloomberg, RBC, the Institute of International Finance and other sources.

The economic growth in advanced economies rose by 0.1 pp. as compared to the previous year and stood at 1.9%, while in developing countries it slowed from 4.6% of the previous year to 4.0%².

In the context of the current economic activity and price changes in commodity markets, a low inflationary environment was formed in the global economy. Consequently, the IMF has estimated the inflation to be 0.3% in advanced countries and 5.5% in emerging countries. Moreover, no inflationary pressures are expected to occur in the following year.

IMF Overview of the World Economic growth Projections, 2014-2015, in percent

Indicator (economic growth)	2014 forecasts as of 31.07.14	2014 forecasts as of 31.10.14	2014 assessments as of 31.01.15	2015 forecasts as of 31.01.15	2014 assessments as of 30.04.15	2015 forecasts as of 30.04.15	2014 assessments as of 31.07.15	2015 forecasts as of 31.07.15	2014 assessments as of 31.10.15	2015 forecasts as of 31.10.15	2015 assessments as of 15.04.16
World economy	3.4	3.3	3.3	3.5	3.4	3.5	3.4	3.3	3.4	3.1	3.1
Developed countries	1.8	1.8	1.8	2.4	1.8	2.4	1.8	2.1	1.8	2.0	1.9
USA	1.7	2.2	2.4	3.6	2.4	3.1	2.4	2.5	2.4	2.6	2.4
Euro area	1.1	0.8	0.8	1.2	0.9	1.5	0.8	1.5	0.9	1.5	1.6
Developing countries	4.6	4.4	4.4	4.3	4.6	4.3	4.6	4.2	4.6	4.0	4.0
CIS	0.9	0.8	0.9	-1.4	1.0	-2.6	1.0	-2.2	1.0	-2.7	-2.8
Russia	0.2	0.2	0.6	-3.0	0.6	-3.8	0.6	-3.4	0.6	-3.8	-3.7
China	7.4	7.4	7.4	6.8	7.4	6.8	7.4	6.8	7.3	6.8	6.9

The economic growth in advanced economies was mainly fuelled by sustainable recovery of the US economy. Though the US economic activity declined at the beginning of the year, it grew steadily during the year due to wage growth, satisfactory labor market conditions, lower fuel prices and strengthening real estate market. It is anticipated that the current economic growth will uphold in the following years given the decline of household debt burden (debt service costs in the disposable income structure were the lowest in the last 35 years), the real estate market stabilisation and expansionary fiscal policy.

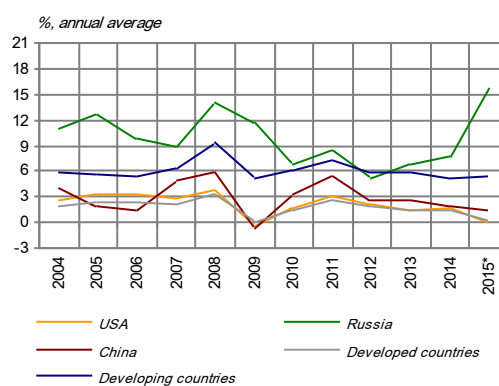
Since December 2015, the Federal Reserve System (FRS) has adopted a new direction of monetary policy. After maintaining the federal funds rate at the zero lower bound for seven years, it was lifted by 0.25 pp. to 0.25-0.5% target level. Though this rates hike was an important momentum for financial markets, the still-easy monetary conditions significantly contribute to the positive progresses in labor and housing markets.

As opposed to these positive trends, the US economy remains ambiguous because of dollar strength weighing on manufacturing activity and lower oil prices curtailing investment in mining structures and equipment³.

² All forecasts and assessments of IMF were taken from "World Economic Outlook, April 2016"

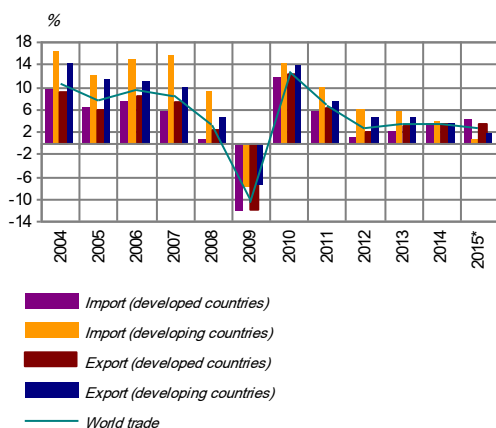
³ <http://www.imf.org/external/pubs/ft/weo/2016/01/pdf/text.pdf>.

Inflation in selected countries



A stable economic growth was registered in the USA during the year.

Annual growth rate of world trade



Source: IMF.

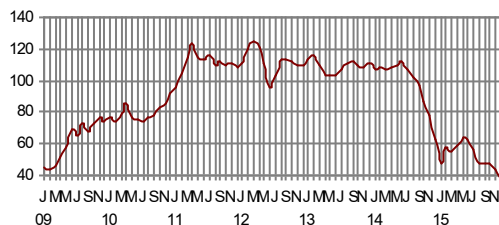
The decline of economic growth rates persisted in emerging markets.

The decline of world trade is conditioned by lower output in main advanced and emerging countries.

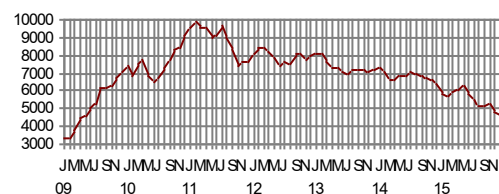
A continuous drop in commodity prices was recorded.

The fluctuations of prices of base metals were largely in line with economic and political developments.

Brent oil prices
(USD per barrel)



Copper prices
(USD per ton)



Source: Bloomberg Data Warehouse.

According to the IMF assessments, a 2.4% economic growth was recorded in the US in 2015, which will persist in 2016.

In the European countries a recovery in economic growth was recorded in 2015, contributed by low raw material prices and some activation in the credit market due to the implementation of ECB's quantitative easing started at the beginning of 2015.

Economic growth was hampered by weak investment climate, which appears to reflect the uneven confidence of financial markets, despite the low level of interest rates.

It is anticipated that stable recovery of domestic demand, quantitative easing, as well as lower oil prices and easy monetary conditions will support further economic activity of the euro area. Meanwhile, these positive factors may be offset by weaker investment prospects, due to low economic growth of emerging markets – main partner countries of the euro area.

The economic growth in the euro area is assessed 1.6% and forecasted 1.5% for 2016 by the IMF.

In 2015, the economic growth of emerging markets and developing countries, which produce almost 70% of world economic growth, continues to decline, though with optimistic forecasts for 2016.

The Chinese government puts significant efforts in navigating the economy towards another qualitative dimension by transitioning towards more sustainable growth based on private-consumption rather than state-investment. In fact, the development prospects of world economy and especially China in the coming years depend on the success of this policy.

One of the main reasons of economic slowdown in emerging countries is low prices of stock commodities and strict financial conditions (especially in Latin America and oil-producing countries), as well as geopolitically-driven economic difficulties (especially in CIS, Middle East and North African countries). The economic slowdown in emerging countries will persist in the near-term, conditioned by low prices of exported products, monetary policy tightening trends worldwide, weak exports, as well as inevitability of economic reforms.

In 2015, the economic growth in China was assessed 6.9%, the lowest since the global financial crisis.

The IMF assessed 4.0% economic growth in emerging countries in 2015 and forecasted 4.1% growth in 2016.

In 2015, no significant growth of world trade has been recorded after the low economic growth of 2014. Weak economic growth in China, which is the main contributor to the world trade, as well as a shift from export-oriented economic model to one driven by domestic demand, affected considerably the slowdown of world trade growth. Simultaneously, the ongoing conflicts between Russia and the EU hindered considerably the expansion of trade volumes (for details, please see box "Economic developments in Russian Federation"). Given the IMF data, the annual growth rate of world trade was 2.8% in 2015 and would be 3.1% in 2016.

In 2015, a decline in the international prices of main commodities was recorded, conditioned by worldwide trends and distinctive developments in certain commodity markets.

Brent crude oil annual average price was USD 52.4 a barrel, maintaining the declining trend of the previous year. As compared to the previous year, the price drop made 43.3% because of oil

oversupply (a considerable expansion of shale gas production in the US, Iran entering oil market, as well as keeping the oil pumping volumes unchanged by OPEC in an effort to maintain its market share⁴). The current low prices and main factors hindering their future sharp rise are the persisting large supply and the low demand due to China's economic growth decline.

In 2015, the declining trend of copper and molybdenum prices persisted. The average annual price of copper declined by 12.3% as compared to the previous year to 5500.6 US dollars/tonne. The average annual price of molybdenum dropped by 34.7% to 17.1 thousand US dollars/tonne compared to the same period of the previous year.

International stock prices of base metals, all other factors being equal, will remain subject to development trends of emerging market economies, in the short-term. No significant increase will be recorded.

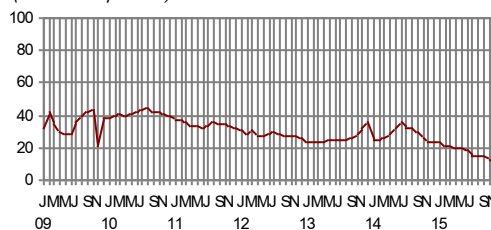
Wheat international prices have assumed a declining trend during the year. The average annual price was 5.6 US dollars per bushel in 2015, declining by 21.7% as compared to the previous year. In the short-term, expectations for wheat prices are on a downward trend, conditioned by the oversupply, though a stabilization of prices is expected in the medium term.

Average annual international gold price amounted to USD 1160.5 per troy ounce in 2015, declining by 8.4% against the previous year.

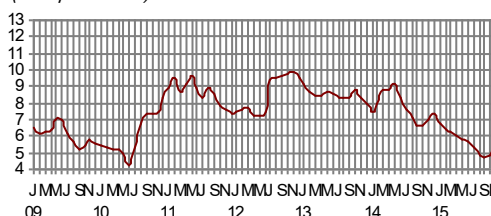
No significant change in gold prices is assumed in the short-term, owing to expected recovery rate of the global economy.

Wheat prices recorded a decline as compared to the previous year.

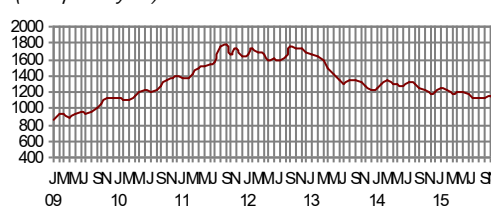
Molybdenum prices
(1000 USD per ton)



Wheat prices
(USD per bushel)



Gold prices
(USD per troy oz)



Source: Bloomberg Data Warehouse.

Box 1

Economic developments in Russian Federation

In 2015, the economic stance of Russia did not improve as compared to the previous year. An economic downturn was recorded, which reflects the low energy prices, geopolitical stance and applied sanctions¹, as well as capital outflows and volatility of national currency. Almost all sectors of the economy contributed to the recession, especially the decline in construction and investment volumes. A non-competitive business environment and weak development of infrastructures remain major impediments to Russia's economic growth.

Given the negative withdrawals of Russian economy, a number of rating agencies have downgraded Russia's rating during the year, the Fitch rating company being one of them. The grounds for the downgrade were sharp decrease of oil prices, high volatility of national currency and applied sanctions, which made Russian economy extremely vulnerable. According to the agency's assessment, the economic recession of Russia will continue till 2017². The Moody's international rating company has also downgraded Russia's sovereign rating to Ba1 with a "negative" perspective at the beginning of the year³.

According to the Russian Federal State Statistics Service data, a y-o-y 3.7% fall in economy was recorded in 2015, as compared to the previous year⁴. Industry, construction, investment, as well as households' real disposable income growth indicators are still negative.

The highest rates of per annum deteriorations were recorded in exploitation of residential buildings (by 18.7%) and retail trade turnover (by 12.7%). Significant reductions were detected in capital investment and construction sector, 6.9% and 4.7%, respectively. The main factors hindering investment were the decline in consumer demand in midst of fall in households' disposable income, as well as limited access to financial resources due to big difficulties of Russian companies to obtain international loans and high interest rates in national financial market. The increase of credit funds prices and high uncertainty level towards business environment have led to capital outflows and inflation.

⁴ <http://www.nytimes.com/2015/06/06/business/international/opec-oil-prices.html>

The fall in oil prices and worsening of external economic situation aggravated the existing problems. According to the Russian Federal State Statistics Service data, exports in January-December amounted to USD 339.6 billion, representing a y-o-y 31.8% decrease in relation to 2014.

Imports are an estimated USD 194.0 billion, which represents a 37.0% year-on-year reduction. Thus, the trade balance surplus amounted to USD 145.6 billion.

As of December 2015, the 12-month inflation was 12.9%, 1.5 pp. more than reported last year. According to preliminary data provided by the Russian Ministry of Economic Development, the unemployment rate remains low, which, ignoring the seasonal factor, is an estimated 5.6%.

In 2015, in face of rising geopolitical tensions and growing demand over supply for foreign currency, the Russian currency weakened against other currencies. The deflation of national currency, high inflation and pessimistic expectations created severe problems to financial stability. To ease the situation, the Central bank of Russia has continuously altered the refinancing rate, to an 11.0% rate lastly. It is noteworthy, that the Central bank of Russia has used foreign currency repo tool in order to keep the smooth functioning of the banking sector. Starting from May, the Central bank of Russia has decided to buy foreign currency from the domestic market in order to replenish its foreign currency reserves. This has considerably affected the Russian ruble depreciation. Based on annual data, the Russian ruble official exchange rate has depreciated versus US dollar by 30.0% compared to December 2014. The RUB depreciated versus EUR by 16.5%. During the reported year, Russia's international reserves decreased by 4.4%.

During 2015, loans to economy by the banking system of Russia grew by 7.6%. Simultaneously, the share of non-performing loans in total loans was 6.2%.

¹ As for geopolitical tensions associated with Ukraine, starting from March 2014, the United States and the European Union launched series of trading and economic sanctions against Russia. This has negatively affected the capital flows, foreign investment and domestic economic growth overall. The announced sanctions apply to the financial, energy and military industry sectors. In particular, restrictions were imposed on ammunition, some articles of dual-use purpose, as well as on export of a number of oil industry equipment and technology to Russia. Any financial assistance that would be for trading of items included in the list of restrictions has been prohibited. Furthermore, restrictions were imposed on individual companies and organizations active in financial, defense and fuel/energy sectors, with the main stipulation that transactions with financial instruments with 30-day and more maturity issued after September 12, 2014 is prohibited.

² <https://www.rt.com/business/221363-fitch-russia-crisis-economy/>:

³ https://www.moodys.com/research/Moodys-changes-outlook-on-Russias-Ba1-government-bond-rating-to--PR_339462:

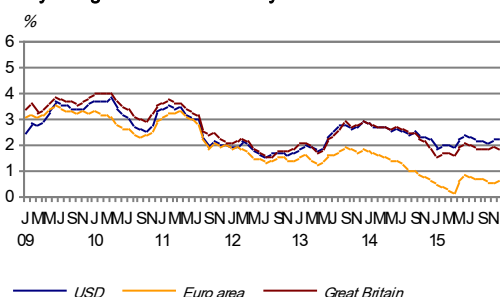
⁴ Information on the Russian economic developments, as well as estimates and projections are taken from the periodical "Об итогах социально-экономического развития Российской Федерации в 2015 году" ("About the current social-economic developments of the Russian Federation in 2015) issued by the Russian Ministry of Economic Development.

http://economy.gov.ru/wps/wcm/connect/bfeda678-29cd-44ae-b07b-d3c6d7200d32/%D0%98%D1%82%D0%BE%D0%B3%D0%B8_2015.pdf?MOD=AJPERES&CACHEID=bfeda678-29cd-44ae-b07b-d3c6d7200d32

1.2. INTERNATIONAL FINANCIAL MARKETS

The yields of government bonds grew in both the US and the EU.

10-year government bond yield



Source: Bloomberg Data Warehouse.

Central banks of key developed and emerging market countries carried on accommodative monetary policy.

During 2015, no significant fluctuations in international financial markets were observed: though the main set of risks remained unchanged. A number of countries worldwide continued to implement accommodative monetary policy in order to stimulate global economic growth. The US Federal Reserve announced the end of low-rates policy at the end of the year. The capital outflow from emerging countries continued leading to national currency depreciations.

In 2015, long-term government bond yields both in the US and the EU grew. However, the loan market stance was favourable for the real sector borrowers. The growth of profitability was somehow related to recovery of economic activity and above-zero inflation. In the EU, the yield growth has also reflected the adjustment from the extremely low-level inflation due to asset purchase project by the ECB.

In 2015, given the main economic challenges and instable growth of global economy, the key developed countries carried on low interest rate policy.

The ECB maintained the main monetary rates unchanged during the year, in order to promote growth of bank credits and fight against low inflation. The ECB conducted its asset purchase

dprogram with a monthly volume of 60 billion euros from March 2015 to March 2016. Meanwhile, in March 2016, the ECB lowered the refinancing rate from 0.5% to 0.0% and increased the amount of its monthly asset purchases up to 80 billion euros⁵.

The Bank of England kept monetary policy rate at a low level, the revision of which would not only depend on the rate of unemployment but also on changes of a number of economic activity indicators, as the Bank had announced.

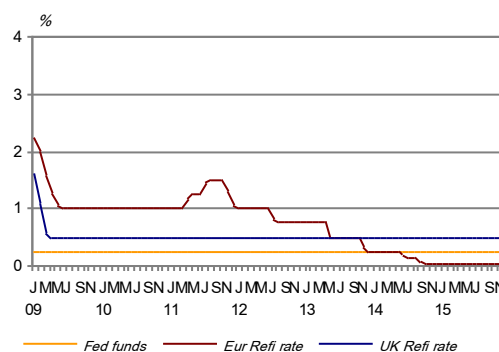
In December 2015, the US Fed hiked its benchmark interest rates for the first time since the global financial crisis to new target between 0.25 percent and 0.50 percent. The interest rates hike was grounded with steady recovery of US economy and in some point was an announcement of the end of the central bank's accommodative policy and low interest rates. The competent authorities have emphasized the gradual adjustment and solely under the conditions of sustainable economic growth. The market participants expect the interest rates to increase by 1 percentage point in the next three years.

Given the capital inflows to the US due to rate growth policy and low prices of commodities, a number of developing countries have seen substantial capital outflows, which resulted in a significant depreciation of national currencies. Countries that have current account deficit, i.e. Brazil, India, Russia, South Africa and Turkey were more sensitive to these outflows.

During the reporting period, major currencies assumed volatile trends. The US dollar has mainly appreciated versus euro, driven by economic policies conducted by the United States and European countries as well as expectations. The depreciation trend of currencies of emerging markets, which started since 2013, has persisted throughout the year. The currency patterns were attributable to both the Fed's policy and domestic developments across countries, such as need for external financing, domestic monetary policy, political stability, price patterns of commodities and sensitivity against the fluctuations of the US dollar.

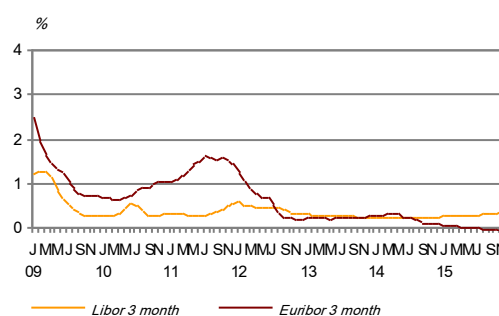
Low base rates and global economic imbalances determined the maintenance of low-level interbank interest rates.

Interest rate policies of Central banks

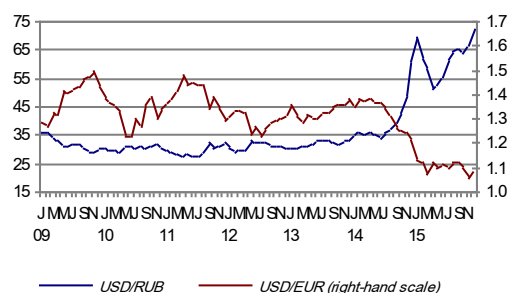


Favorable macroeconomic developments encouraged the Fed to the benchmark interest rates hike.

Interbank interest rates



Dynamics of USD exchange rate versus RUB and EUR



Source: Bloomberg Data Warehouse.

SUMMARY

In 2015, the global economy continued recovering, though slower-than-expected because of the downward risks.

In developed countries, except the USA, issues like low pace of economic growth, low inflation and risks to financial system remain on the agenda. Under such conditions, developed countries kept on implementing low interest rate policy, except the US, which changed the direction of its rates policy at the end of the year.

⁵ The ECB intends to carry out this project until the end of March 2017.
<https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html>

Emerging markets and developing countries encountered capital outflows, which led to domestic currency depreciation pressures. The private debt burden volumes have been risky in the financial stability viewpoint. Apart the economic risks hampering growth in emerging markets, geopolitical risks associated with the crisis in Ukraine, as well as relations between Russia and West got a particular emphasis.

Russia's economic recession, the depreciation of Russian ruble and the decline in private consumption considerably decelerated the inflow of non-commercial remittances from this country and growth rates of export to Russia.

Uneven world economic growth, the change in the US monetary policy stance and current economic challenges in Russia negatively affected Armenia's investment environment, economic growth, private transfers and export growth.

2. MACROECONOMIC ENVIRONMENT DEVELOPMENTS IN ARMENIA

2.1. MACROECONOMIC DEVELOPMENTS ⁶

Under the conditions of foreign adverse economic developments, the consequent risks were reflected in Armenian economy, making the financial system stability more vulnerable.

During the year, a higher-than-anticipated economic growth was registered due to the expansionary fiscal policy of Armenian government and easing of monetary policy conditions by the Central bank of Armenia.

In 2015, the economic growth in Armenia was 3.0%, according to the National Statistical Service of Armenia. The contribution to the economic growth came mainly from the production volumes of industry and agriculture exporting sectors.

The positive trends in the industry sector of the end of the first half of the year were maintained. The value added in industry sector was 6.3% y-o-y due to 1.5-fold increase in production volumes of metal ores.

The growth of value added in agriculture was 11.4% for the period under the review. The sector growth was due to increase in production volumes of such sub-sectors as plant propagation, animal production and fishing production by 15.2%, 6.1% and 6.4%, respectively.

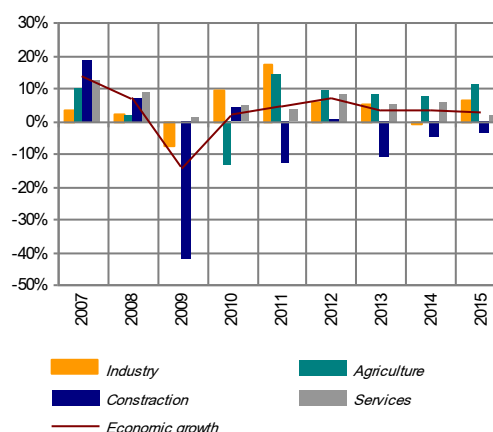
In 2015, construction sector value added decreased by 4.2% y-o-y driven mainly by shortened volumes of construction funded by companies, as well as government and communities. Construction funded by international loans, humanitarian aid and households have increased by 20.5%, 73.0% and 1.5%, respectively.

The growth of value added in services sector was 1.8% in 2015, given the NSSA data. This has been fueled by a 2.7% increase in the volumes of services rendered, particularly arts, entertainment and recreation services (68.1%) and financial and insurance activities (3.6%). At the same time, as the remittances diminished drastically, the national disposable income has shortened and the volumes of retail and wholesale trade, as well as sale of cars have fallen by 10.1%, 4.2% and 9.8%, respectively.

The private consumption, which forms the aggregate demand, has fallen by 7.9%, according to the NSSA data. The fall of private consumption is attributable to continuous decrease in money transfers from Russia, low level of business activity as well as slowdown of loans to economy. The shortening of private sector spending has been mitigated due to the expansionary fiscal policy carried out by the Armenian government, thus, the public consumption grew by 3.1% as compared to the previous year.

The private investment dropped by 6.5% during the year due to ongoing weak investment activity. The low investment activity could be explained by shortage of domestic demand, on the one

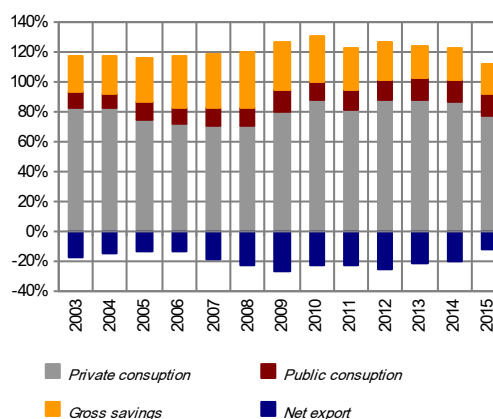
Real GDP growth and main sectors of economy



Source: National Statistics Service of Armenia.

In 2015, Armenia reported 3.0% economic growth contributed by increases in industry and agriculture.

GDP expenditure components
(share in GDP)

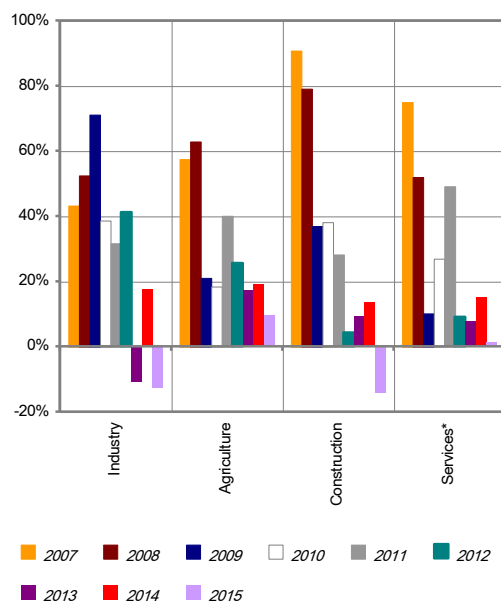


Source: National Statistics Service of Armenia.

⁶ For details on the developments of macroeconomic environment in Armenia, see the quarterly publication "Inflation Report" by the CBA, 4th quarter, 2015.

In 2015, lending to public catering and services, as well as agriculture increased.

Growth of lending to main sectors of economy



* In chart the sector of services includes trade and other service sectors' aggregate values.

Source: Central Bank of Armenia.

According to the qualitative indicators of Armenia's public debt Armenia remains a less indebted country.

hand, and less lending to companies, on the other. Though private investment reported a decline, the public investment grew by 12.3%.

In 2015, amidst weak economic activity loans to economy have fallen by 3.8%. The lending decline was caused by the decrease of loan demand and loans' terms and procedures tightening. The lending to industry and trade sectors underwent the most significant decrease. At the same time, lending to transport, event catering and agriculture grew by 59.3%, 16.7% and 9.6%, respectively. The share of non-performing loans and receivables in total loans and receivables was 8.2% at the end of the year. The shares of non-performing loans in agriculture, event catering activities and industry sectors underwent significant progress.

Taking into account foreign and domestic developments, terms and procedures for business and mortgage loans were tightened by financial organizations in the fourth quarter of 2015. Simultaneously, the demand for abovementioned loans has fallen. Nevertheless, the banks and credit organizations have positive expectations of credit supply expansion and slight demand growth for business loans in the first quarter of 2016.

According to surveys conducted by the Central Bank of Armenia, Business Climate Indicator⁷ was 50.5 in the fourth quarter of 2015, which is within the stability range. Moreover, the indicator has grown by 0.2 pp. compared to the previous quarter and by 1.3 pp. compared to the previous year. The latter suggests that businesses are optimistic for the business environment.

According to the Republic of Armenia Ministry of Finance data, foreign debt of Armenia has grown by 14.1%, in 2015, which is 40.9% of GDP. The growth of foreign debt is a result of the relocation of the second trench of Eurobonds with a total value of USD 500 million in March 2015. Funds attracted from international organizations at the end of the year also impacted the growth of foreign debt. From the effective debt management viewpoint, it is important to mention that the share of loans with a floating rate in the structure of loans is low, which lessens the interest rate risks.

Qualitative public debt indicators of the Republic of Armenia

Indicator	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Debt/GDP (limit 50%)	22.4%	18.9%	15.7%	13.4%	34.3%	35.6%	35.2%	35.2%	35.1%	32.5%	40.9%
Debt/Export	75.3% (less indebted)	73.2% (less indebted)	73.6% (less indebted)	81.1% (less indebted)	190.3% (moderately indebted)	149.3% (moderately indebted)	130.2% (less indebted)	128.1% (less indebted)	123.6% (less indebted)	114.1% (less indebted)	137.5% (less indebted)
Debt service/Export	4.2% (less indebted)	3.5% (less indebted)	2.6% (less indebted)	2.8% (less indebted)	4.6% (less indebted)	4.1% (less indebted)	3.7% (less indebted)	8.2% (less indebted)	27.3% ⁸ (moderately indebted)	8.1% (less indebted)	12.5% (less indebted)
Interest/Export	0.8% (less indebted)	0.6% (less indebted)	0.5% (less indebted)	0.6% (less indebted)	1.8% (less indebted)	2.0% (less indebted)	1.8% (less indebted)	1.9% (less indebted)	1.6% (less indebted)	2.3% (less indebted)	3.3% (less indebted)

In 2015, Armenia remains a less indebted country, according to the qualitative indicators of Armenia's public debt.

⁷ A composite economic index of business climate that the Central Bank builds based on quarterly survey data on different sectors of the economy.

⁸ The debt service/export indicator does not include the early repayment of Russian loan. In case of taking into account the repayment, the debt service/export will reach 27.3%.

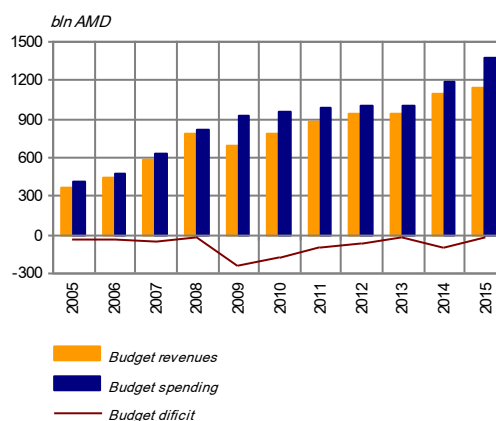
Though lower figures of the Republic of Armenia state budget were reported against expected performance values in 2015, the fiscal policy had expansionary effect (2.5) on the economy, conditioned by income (0.9) and expenditures (1.6) expansionary policies.

According to the NSSA data, budget revenues⁹ have not recorded a noticeable change in 2015, a mere 0.9% growth. The growth was attributable to 7.8% growth of income tax sub-item. Public expenditures¹⁰ grew by 12.2% compared to the same period of the previous year, due to both current and capital expenditures surge. Moreover, almost all expenditure figures grew.

As a result, the accelerated growth of expenditures over revenues has resulted in a state budget deficit of 4.75% of GDP according to preliminary data.

In December 2015, the 12-month inflation was -0.1%. The deflation was mainly caused by 3.6% decline in prices of food products resulting from a weaker domestic and external demand, which contributed to deflation by -1.81 pp. overall.

Main indicators of government budget



Source: National Statistics Service of Armenia.

In December 2015, the 12-month inflation was -0.1%.

2.2. FOREIGN TRADE

In 2015 as compared to the same period of the previous year, current account deficit of the Republic of Armenia has improved by USD 569.8 million, given the CBA data. Hence, the Current account deficit/GDP ratio was 2.6%, which is 4.7 percentage points lower than the same ratio in the same period of the previous year.

The shortening of the current account deficit, amidst the decrease of money transfers of individuals, was mainly due to significant amelioration of account deficits of goods and services. The improvement of trade deficit was a result of growth of goods exports amidst decrease of imports in real terms.

Given the Central bank of Armenia assessment, the real exports of goods and services increased by 13.7%, according to the balance of payments, though the international prices of raw material commodities decreased. The net imports declined by 7.8%.

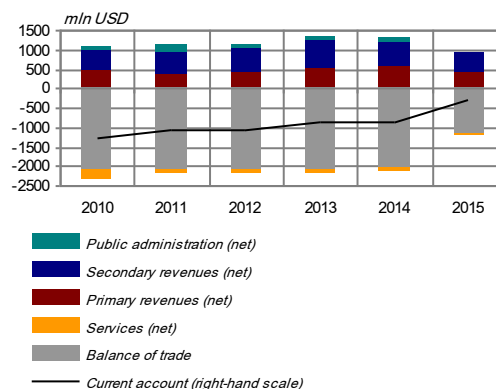
The dollar value of imports of goods and services has decreased by 20.3%, while the export has fallen by 5.4%, due to fall in export prices.

By structure of imports, a decrease in import volumes was recorded in all goods items except in instruments and appliances. Moreover, the following import items reported the largest declines: "precious and semi-precious stones, precious metals and articles thereof" and "mining products".

By structure of exports, the main increases were in "mining products" and "textile products" for 19.9% and 62.9%, respectively.

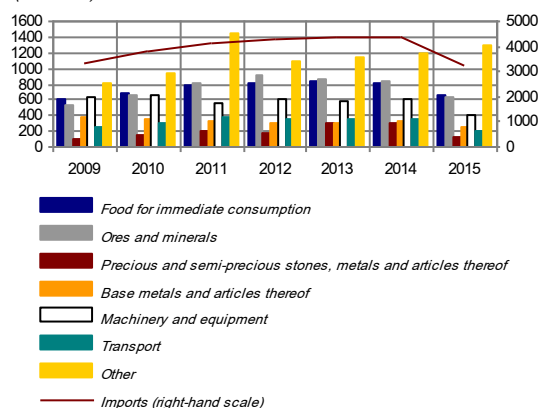
In 2015, the Current account deficit/GDP ratio increased and stood at 2.6%, due to significant improvement in the trade balance deficit.

Main indicators of balance of payments



Source: Central Bank of Armenia.

Armenia's imports by commodity groups (mln USD)

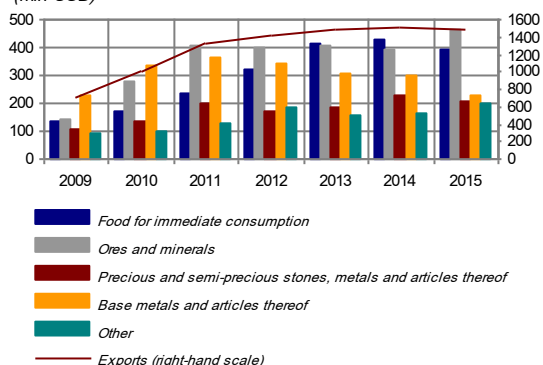


Source: National Statistics Service of Armenia.

⁹ This includes extra-budgetary funds, and does not include funds received within the framework of projects financed from external sources..

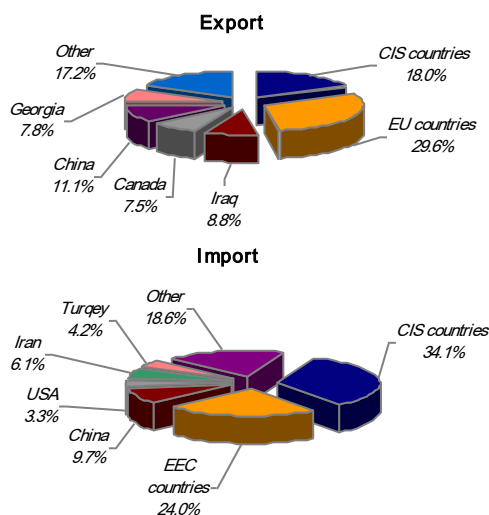
¹⁰ This includes working funds of project implementation units.

Armenia's exports by commodity groups
(mln USD)



Source: National Statistics Service of Armenia.

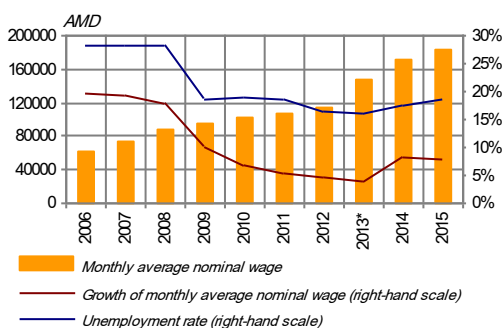
Armenia's foreign trade, by country, as of 31.12.2015



Source: Central Bank of Armenia.

Both wages and unemployment rate grew during the year.

Nominal average wage and unemployment



* The indicator is calculated according to the Republic of Armenia Law on Income Tax, effective from 01.01.2013, which stipulates that mandatory social charges payable by the employer have been also included in salaries and salary equivalents since January 1, 2013.

Source: National Statistics Service of Armenia.

In 2015, Armenia's external trade concentration level by countries has decreased, because of 4.7 pp. lower share of trade partner Russia in the structure of exports. The latter has diminished the sensitivity of Armenia's economy to unfavorable developments in Russia. Taking into account the continuous low level of external demand, the export volumes to Russia and the Euro Union have declined by 26.7% and 5.2%, respectively. At the same time, export volumes to Iraq, Georgia, Canada and Switzerland have grown.

In 2015, according to the Herfindahl-Hirschman index, the concentration of commodity exports has grown slightly compared to the previous year to 0.188. This index value is mainly due to great share of mining and food sectors, which makes export more vulnerable to the developments in these sectors.

As for the structure of export of goods, increases were reported in such items as "mining products" and "textile products", while "non-precious metals and articles made thereof", "food for immediate consumption" and "precious and semi-precious stones, precious metals and articles made thereof" posted decreases.

2.3. HOUSEHOLDS INCOME AND DEBT BURDEN

In 2015, domestic macroeconomic developments influenced the labor market of Armenia. Both wages and unemployment rate grew. The average annual unemployment rate grew to 18.5% as opposed to 17.6% of the previous year. This growth influenced the level of household income, accompanied by a reduction in remittances from abroad. Given the relatively low economic growth expected in the coming year, the unemployment rate will remain almost unchanged (18.1%), while nominal wage growth will be relatively low (3.6%), in 2016¹¹.

In 2015, a 7.8% growth was registered in average nominal wages, due to a rise in nominal wages in both public sector (y-o-y 8.8%) and private sector (y-o-y 6.6%). Since July 2015, minimum wages threshold was raised to AMD 55000.

The ongoing economic developments have also been reflected in the components of Consumer confidence index¹². In 2015, such current conditions sub-indexes as changes in financial conditions and households assessments of overall economic situation remained considerably lower than 45-55 range of stability. The future conditions index remained within the range of stability.

In the fourth quarter of the year as compared to the previous year, only the sub-index of expectations for changes in financial conditions in the upcoming quarter has increased, the value of which, however, remains low compared to other sub-indexes.

The higher unemployment, as well as lower remittances from abroad have affected the credibility of households, therefore the

¹¹ Source: "Inflation Report" by the CBA, 4th quarter, 2015.

¹² Source: summaries of quarterly surveys on "Consumer confidence index" by the CBA, 2015.

volume of lending to households. Resident households' total liabilities to financial institutions have fallen by 3.0% to AMD 920.0 billion during the period under review. The volume of credit liabilities to banks has decreased by 4.0%, while credit liabilities to credit organizations and pawnshops have grown by 2.7% and 3.1%, respectively. This witnesses the increasing competition in the consumer credit market.

During the year, consumer loans have decreased by 5.6% caused by the decrease of card loans, car loans and other consumer loan types. Gold collateralized loans and loans for purchase of household and computer appliances posted 4.2% and 11.0% growth rates, respectively. The shares of gold collateralized loans and card loans in total consumer loans prevail. The main factors hindering the consumer lending continue to be the reduction of household income, as well as high level of debt burden¹³.

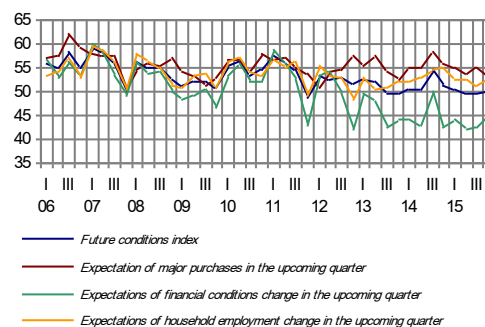
Though the consumer loan procedures were tightened during the first half of the year, some mitigation of credit terms was observed starting from the third quarter. This was due to growing competition between banks and other financial institutions¹³. These improvements include revision of loan repayment schedules, creditworthiness assessment, as well as application of non-interest charges. Loan-to-value ratios and collateral requirements remain relatively strict. Banks and credit organizations expect that both supply and demand for consumer lending will grow in the first quarter of 2016.

Mortgage loans improved by 4.2%, contributed mainly by 6.5% increase in mortgage loans for real estate purchase. Mortgage loans for real estate renovation and construction decreased by 5.1%. Overall, the reduction of household income impacts negatively both consumer and mortgage lending, limiting their chances of taking and repaying loans properly.

In this case, refinancing projects of Housing for Youth and the National Mortgage Company continue to contribute to the development of mortgage market. Their refinanced mortgage loans have grown during the year and constituted 24.2% of total mortgage lending portfolio. The National Mortgage Company intends to issue mortgage-backed bonds to expand the abovementioned projects. In March 2016 some amendments were made in government program "Affordable housing for young families" in order to comprise a greater number of young families¹⁴. Amendments in the RA law on income tax that came into force from 1st January 2015 had a positive impact on mortgage market, and particularly on lending for real estate acquisition from the primary market. According to these changes income tax paid by the borrower is being refunded by the government proportionally to the amount of interests for mortgage loans¹⁵.

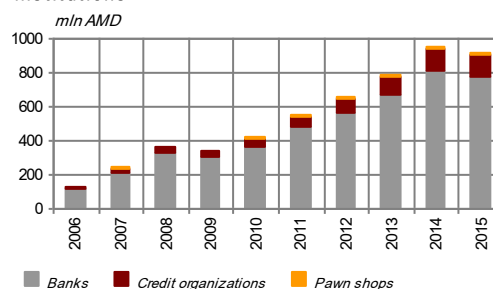
In the period under review, the liabilities of households to financial institutions have declined.

Future conditions index and its components

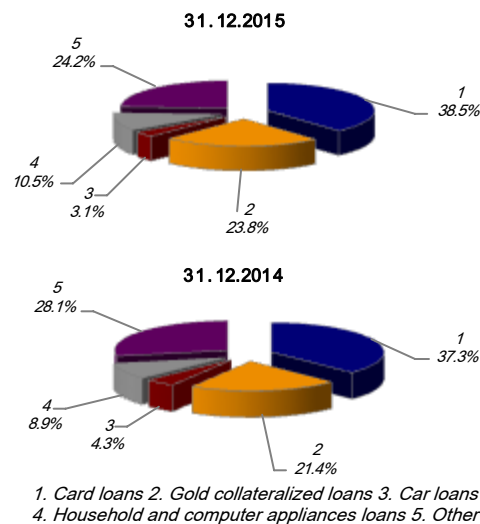


Source: Central Bank of Armenia.

Structure of household liabilities to financial institutions



Consumer loan portfolio structure of banks and credit organizations



Source: Central Bank of Armenia.

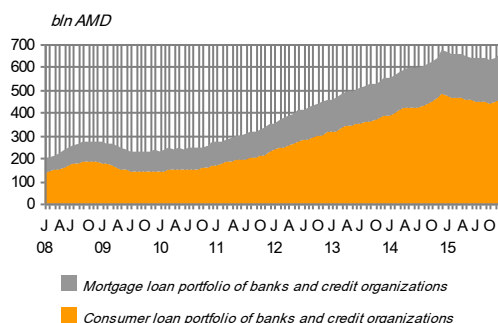
¹³ Source: summaries of quarterly surveys on "Lending conditions by RA banks and credit organizations" by the CBA, 2015.

¹⁴ According to those changes, the maximum age limit for potential young beneficiaries, the maximum cost of housing under the program and the maximum amount of mortgage loans provided were raised.

¹⁵ No. 205-N decision of the RA Government on "Establishing the procedure of income tax refund to hired employees, individual entrepreneurs and notaries equal to the amount of interests paid for mortgage loans" February 19th, 2015.

The debt burden of Armenian households has reduced.

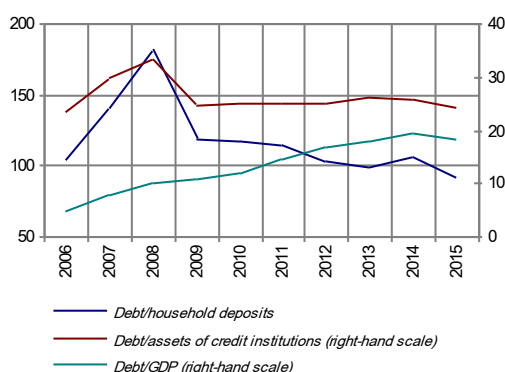
Consumer and mortgage loan portfolio of banks and credit organizations



Source: Central Bank of Armenia.

The risks arising from loan portfolio quality of households had an arising trend.

Households debt burden indicators, %



Source: Central Bank of Armenia.

During the year the share of foreign exchange mortgage loans decreased by 4.0 percentage points, but it is still quite high, 54.0%, which shows that borrowers who receive dram-denominated income are vulnerable to foreign exchange risks.

In 2015, some decline in households debt burden indicators was observed. Due to GDP rise and decrease of lending to resident households, the share of households loans in the GDP has reduced by 1.4 pp. to 18.2%. A decrease was also registered in debt to deposits ratio, which amounted 91.5% during the year, against 106.1% in 2014. This means that households have become net creditors for credit institutions.

During the year, the share of FX deposits in total deposits remains high (71.3%). This limits the banks' ability to allocate financial funds in Armenian dram assets, and especially the ability to give AMD loans to households.

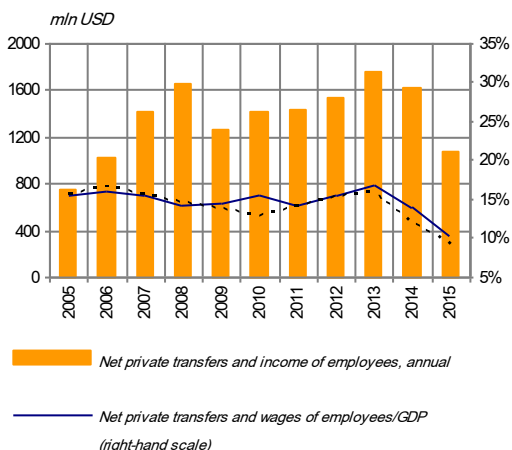
Given the unfavorable macroeconomic changes and an accelerated growth of loan portfolio during the previous years, the credit risk losses of commercial banks have grown in 2015. This has impacted the profitability of banks, meanwhile, have not affected their solvency. The share of non-performing consumer loans grew both for AMD and FX loans to 9.4%. The share of non-performing mortgage loans in total mortgage loans remained almost unchanged at 6.5%.

Furthermore, banks have revised their loan repayment schedules, provided financial consulting to their customers, which reduced the probability of risks to financial stability arising from this sector.

2.4. PRIMARY (FACTOR) INCOME AND PRIVATE TRANSFERS

In 2015, the declining pace of non-commercial remittances was maintained.

Net private transfers and wages of seasonal employees



Source: Central Bank of Armenia.

In 2015, the descending trend of non-commercial transfers was preserved caused by foreign unfavorable economic developments. Private current transfers and outbound workers' compensation declined by 34.6% and 32.2%, respectively. The ratio of private transfers and workers' compensation to GDP has fallen to 10.2% against 13.9% in the previous year. During the reported period, the non-commercial transfers via the banking system have shrunk by 29.6%. In case of accelerated decrease of transfers' inflow over the outflow the net non-commercial transfers' inflow declined by 35.6% to USD 894.9 million. The shortage of transfers has affected the current spending, households' disposable income and their creditworthiness.

The decrease of non-commercial transfers is primarily attributable to the decrease of money transfers from Russia, which occurred because of the depreciation of Russian ruble versus the US dollar on one hand, and economic recession in Russia especially in construction sector, on the other (for details, please see the box "Economic Developments in Russian Federation"). As a result, according to the Central Bank's surveys, the share of urban households receiving non-commercial remittances

declined¹⁶. In 2015, this figure amounted to an average of 12.1% versus 15.2% of the previous year¹⁷.

Considering remittances by each currency separately, a decrease in volume has been recorded in remittances in US dollars and euros from Russia, by 47.0% and 11.1%, respectively. Meanwhile, remittances in Russian ruble, which make up the prevailing part of non-commercial remittances, have grown by 6.7% in 2015.

The share of inflows from Russia narrowed by 7.1 percentage points and amounted to 75.9%, in total remittances. Remittances from the USA grew by 15.3% and their share in total remittances increased by 3.8 pp. to 9.8% in the period under review.

However, the share of remittances from Russia in total remittances is still quite high, which makes the recipient households vulnerable towards unfavorable economic and geopolitical developments in Russia.

The forecasts for inflow of outbound workers' compensation and private transfers for 2016 will remain on the downside, given the expectations that economic uncertainties will retain in Russia¹⁸.

2.5. REAL ESTATE PRICES

In 2015, no stirring of activity was noticed in the real estate market amidst the expansion of foreign and domestic uncertainties. The prices of apartments in multi-apartment homes¹⁹ both in Yerevan and in other towns of Armenia remained merely unchanged. Risks to real estate price fluctuations were insignificant for financial stability. In 2015, the average market prices of apartments in residential apartment buildings in Yerevan increased by 0.2%, on 1m² surface basis, while prices in other towns remained unchanged, in comparison with 2014.

In terms of risk management of real estate price fluctuations, the loan-to-value ratio for property-backed loans set by commercial banks has a great importance. Largely, it varies in the range of 60-80%, in which case the credit risk derived from possible fluctuations in real estate prices is significantly restrained (for details, please see the sub-section "Market risk of commercial banks").

During the year, the decline in disposable income of households has led to the reduction of solvent demand for real estate, which in turn affected the real estate market activity²⁰. In 2015, the number

¹⁶ Source: summaries of quarterly surveys on "Consumer confidence Index" by the CBA, 2015. The survey was conducted among urban households and comprises their data only.

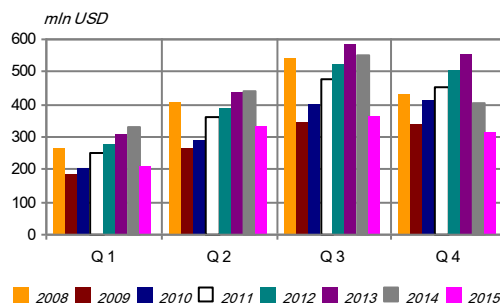
¹⁷ No significant amendments were made in management of workforce inflow to Russia by migration authorities. A noteworthy change was made related to the agreement regarding "The status of Armenian citizens in Russian Federation and Russian citizens in the Republic of Armenia" ratified in March 2015.

¹⁸ Source: "Inflation Report, 4th quarter, 2015" by the CBA.

¹⁹ As there is no single index of Armenia's real estate average price, the criterion for real estate price developments is considered the average price index of apartments in Yerevan

²⁰ Source: summaries of quarterly surveys on "Lending conditions by RA banks and credit organizations" by the CBA, 2015.

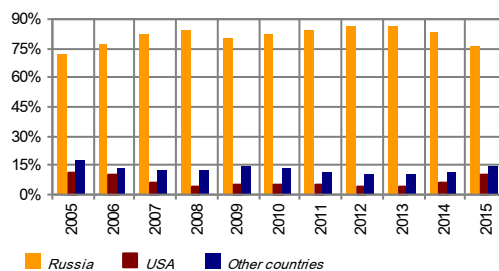
Non-commercial remittances of individuals by banking sector



Source: Central Bank of Armenia.

The share of non-commercial remittances from Russia has fallen considerably, but is still rather high.

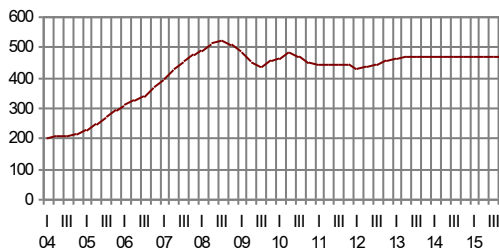
Remittances by countries of origin



Source: Central Bank of Armenia.

In 2015, the apartment prices remained merely unchanged.

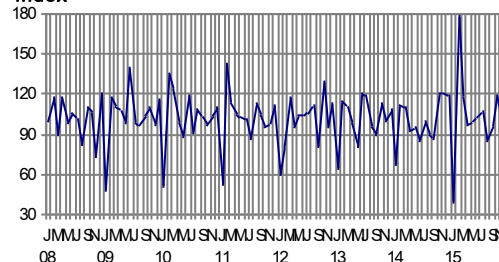
Average apartment price index in Yerevan (sq m)



Source: State Committee of Real Estate Cadaster at the Government of Armenia.

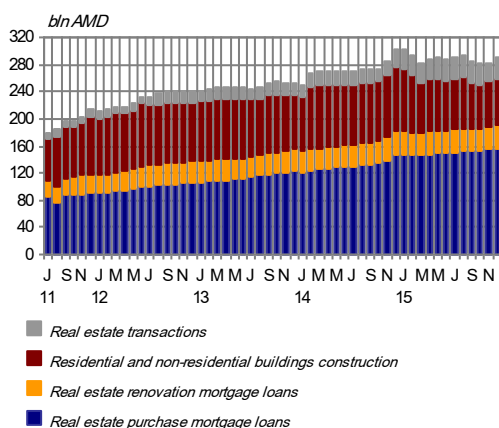
The real estate sale and purchase transactions have decreased, in comparison with 2014.

Real estate sale and purchase transactions index



Source: State Committee of Real Estate Cadaster at the Government of Armenia.

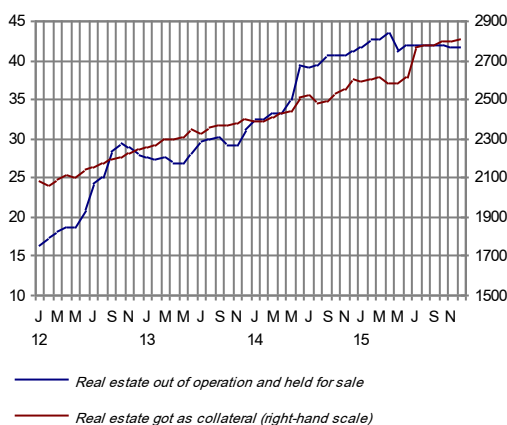
Volume of loans to real estate market



Source: Central Bank of Armenia.

Risks associated with the sale of collateral are key risks.

Volume of real estate out of operation held for sale and got as collateral (bln AMD)



Source: Central Bank of Armenia.

of real estate sale and purchase transactions in Yerevan and other towns has decreased by 15.2% and 14.8%, respectively, as compared to the previous year. In January 2015 amendments to the law on Income tax came into force, which contributed to the stirring of the real estate primary market. Mortgage loans for acquisition of real estate remained crucial and increased by 6.5% to AMD 157.4 billion as compared to the previous year (for details, please see subsection "Households income and debt burden").

According to quarterly surveys conducted by the Central bank of Armenia, sale and purchase transactions in the real estate market by financial institutions will be relatively active in the primary market. No price increases are expected in both primary and secondary markets²¹.

The volume of residential houses commissioned to operate decreased by 11.6% under the conditions of minor activity in real estate market. Volumes of residential houses commissioned to operate financed both by organizations and households decreased by 23.3% and 3.4%, respectively. The share of residential houses commissioned to operate by organizations has fallen to 35.8% in 2015, as compared to 41.2% in 2014. The majority of construction companies, who have participated in the quarterly survey conducted by the CBA, consider that low demand is the main hindering factor for real estate construction²¹. The low demand will remain on the agenda during the next quarter as well.

Loans provided for construction of residential and non-residential buildings has fallen by 27.0% to AMD 67.1 billion. The share of non-performing loans in real estate construction loans has decreased to 10.2%.

Residential buildings completion by sources of financing

Sources of financing	Exploited residential buildings (sq. m) in 2015	Share in total	Percentage change as to 2014
Total, of which :	227,470	100%	-11.6%
State budget	0	0	0
Corporations' funds	81,383	35.8%	-23.3%
Household funds	146,087	64.2%	-3.4%

Source: the National Statistics service of Armenia.

In midst of low activity of real estate market, liquidity risks associated with the sale of collateral are persisting for commercial banks, as the volumes of real estate got as collateral and real estate not in use and held for sale have grown.

²¹ Source: summaries of quarterly surveys on "Lending conditions by RA banks and credit organizations" by the CBA, 2015.

SUMMARY

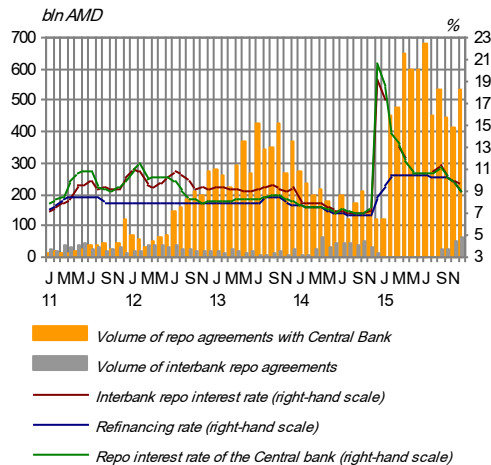
The slowdown in economic activity of the main partner countries of Armenia and persisting deflationary trends of ferrous metals in international markets resulted in reduction of inflows of private remittances to Armenia, cut in exports in dollar-value, as well as reduction of the total trade volume. This has negatively affected business activity and disposable incomes of households, therefore, their creditworthiness. Low inflationary environment during the year had some positive impact on the purchasing power of incomes. Despite the decrease in private remittances and factor income, the current account deficit / GDP ratio was significantly improved, caused by an accelerated reduction of imports over exports. Given the abovementioned developments, the actions initiated by the Armenian government and the Central Bank of Armenia were aimed at increasing economic activity. Thus, the economic growth was 3.0% in 2015.

3. FINANCIAL MARKET STABILITY OF ARMENIA

3.1. MONEY AND CAPITAL MARKET

The Central Bank's expansionary monetary policy of 2015 influenced the financial market interest rates in a descending pace.

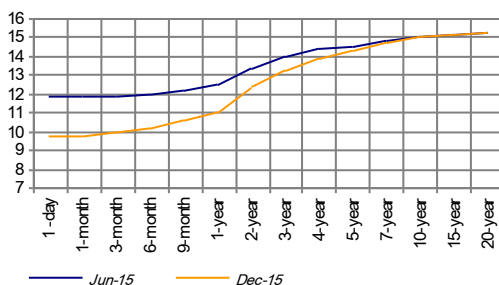
Monthly volume of repo transactions (interbank and with the CBA) and repo interest rates



Source: Central Bank of Armenia.

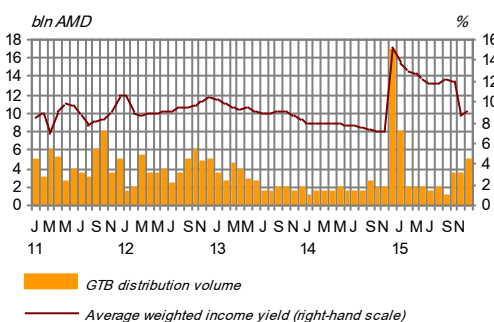
The dynamics of the yield curve show that the yields for short-term and medium-term bonds have fallen.

Yield curves of Armenian government bonds



Source: Central Bank of Armenia.

Short-term treasury bond allocation volumes and weighted average income yield



Source: Central Bank of Armenia.

The previous year-end tensions created in financial and commodity markets were largely neutralized along with the mitigation of inflationary expectations at the beginning of 2015. Consequently, since the beginning of the year the Central bank's measures have mostly had an expansionary direction. In the first quarter of 2015, the Central bank gradually reduced the marginal lending rate to 12.0% from 20.0%. At the same time, the Central bank raised the refinancing rate to 10.5% to maintain the fiscal position of Armenia in the long-term, along with the investment risk and interest rate growth trends in emerging markets. Due to these steps the CBA restored the guiding role of refinancing rate and its normal spread of 1.5 percentage points from Lombard repo instrument, leading to a drop in money market short-term interest rates. A number of macroprudential measures were implemented in the first quarter of 2015 along with the change in interest rates. These measures include zero-level or easy mechanism of reserve requirements for long-term funds attracted by banks, easing of requirements for resident non-financial corporations which have foreign ratings and mitigation of risk weights for foreign currency borrowers engaged in exports.

Given the current low inflationary environment and expected non-inflationary impacts of weak domestic and external demand, the Central Bank lowered the refinancing rate by 0.25 percentage points in August, setting it to 10.25%. Despite the low inflationary setting, the Central Bank refrained from a more rapid weakening of monetary conditions till November, as high inflationary expectations persisted.

In the fourth quarter of 2015 the 12-month inflation dropped faster-than-expected, mainly due to large supply of agricultural products. In this case, the Central Bank has significantly weakened the monetary conditions in November-December, reducing the refinancing rate by a total of 1.5 percentage points to 8.75% in December. It was assessed that inflationary risks arising from the previous year-end would have mostly been overcome, and such slackening of monetary conditions was a return to the regular stance of November 2014.

As a result, during 2015 the Central Bank's expansionary monetary policy impacted the financial market interest rates in a declining direction.

The dynamics of the yield curve²² show that the yields for short-term and medium-term bonds²³ have fallen at the end of the year as compared to the previous half. The long-term yields remained nearly unaffected. In the second half of the year, the

²² The yield curve involves dependence between the yields and maturities of government bonds. Starting from July 2013, the Central Bank is using a new approach in building the yield curve by applying the Nelson and Siegel Model; this is a parametric statistical model and it approximates the yield curve of all periods as a function.

²³ Short-term treasury bills are considered to be 6-month bills and long-term treasury notes, 10-year notes.

spread between 10-year and 6-months bonds widened by 1.0 pp. and stood at 4.0% in the end of the year.

For summarized illustration of what are the current trends in the government securities market, the Central Bank calculates indices of government bonds²⁴, which are presented in the table below.

Indices of government bonds in H2 2015

INDEX	TBI	G03	G05	G5I	GMI
Modified duration	0.34	1.34	1.61	5.12	2.82
Risk weighted yield	11.84	13.36	13.70	15.44	14.79
Average maturity (year)	0.37	1.61	2.02	12.04	5.76
Average weighted coupon %		10.20	9.99	11.93	10.72
Market Price of government bonds (bln AMD)	21173	138587	163190	86945	250135
Market value index change in case of +/-1% yield change (mln AMD)	+/-71	+/-1863	+/-2619	+/-4447	+/-7063
Market value index change in case of yield change by the standard deviation ²⁵ (mln AMD)	5	141	196	256	339

As of the end of the year, modified duration of government coupon bonds outstanding was 2.82, with an average maturity of 5.76 years. These indicators for discount bonds were 0.34 and 0.37, respectively.

In case of a 1% change (increase or decrease) in the yield of government securities, investors' likely loss or gain could be about AMD 7.1 billion or 2.8% of the market value of government bonds. Moreover, a notable portion of the change might come from long-term bonds, as they have greater sensitivity to the interest rate change.

Operations in securities markets (including repo and reverse repo transactions but excluding operations with the Central Bank) carried out by investment service providers²⁶ decreased by 6.8% compared to the previous year and amounted to AMD 3 trillion 123 billion. Transactions involving securities trades constituted 20.5% of the operations mentioned above.

The government securities market liquidity (according to the indicator describing the level of liquidity)²⁷ was more volatile compared to the previous year. The liquidity level was more volatile in February 2015, outpacing average yearly liquidity by 2.0 pp.

²⁴ There are 5 indices calculated for government bonds, of which 4 for coupon bonds and 1 for discount bonds. The coupon bond indices are G03, G05, G5I, which cover bonds with maturities, respectively, from 0 to 3 years, 0 to 5 years and 5 years and more; and GMI, which is a coupon bond index. Indices include the bonds issued in AMD by the Ministry of Finance, with semi - annual fixed coupons and AMD 1 billion and higher turnover. Discount government bonds TBI include bonds with maturity of one week and more, with AMD 400 million and higher turnover.

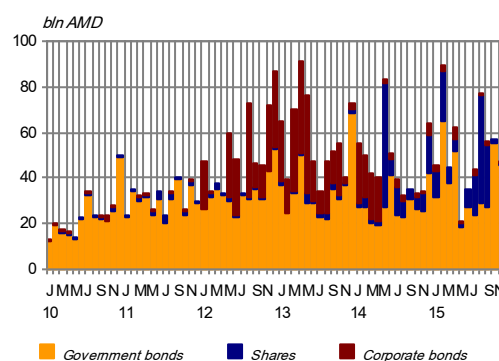
For details, please see the CBA website: www.cba.am

²⁵ Standard deviation of risk weighted yield during 01/07/15 and 30/12/2015.

²⁶ As of 31.12.2015, investment service providers included 21 commercial banks, 8 investment companies and 4 investment fund managers.

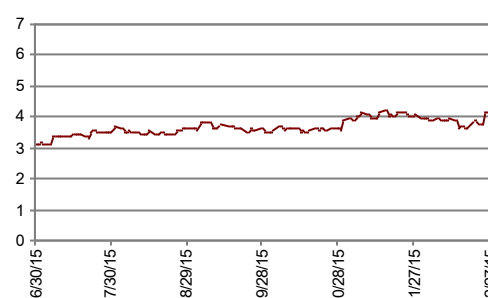
²⁷ The liquidity indicator of government securities market is calculated as a ratio between an amount of monthly trade transactions executed by investment service providers in the secondary market of government bonds and an amount of government bonds outstanding.

Security trades by investment service providers



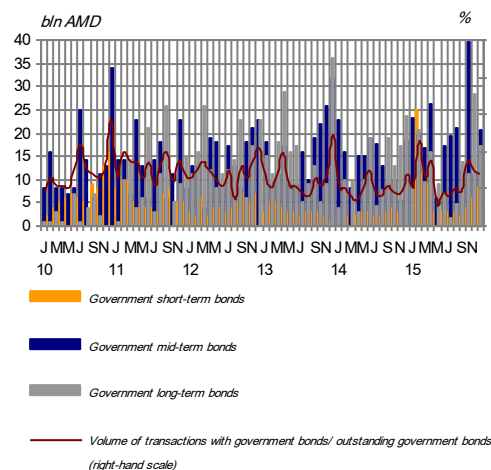
Source: Central Bank of Armenia.

Spread of 6-month and 10-year bonds

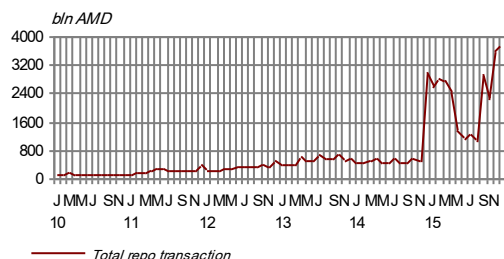


Source: Central Bank of Armenia.

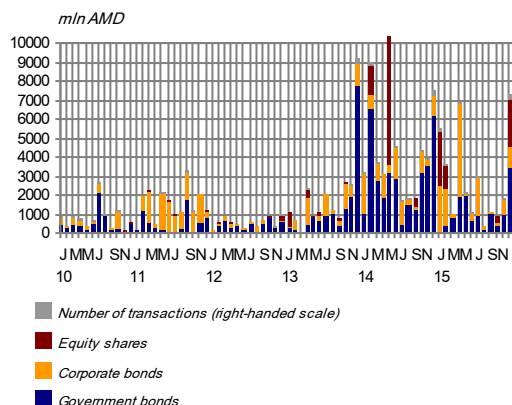
Volume of transactions with government securities and volume of transactions with government securities/outstanding government securities ratio



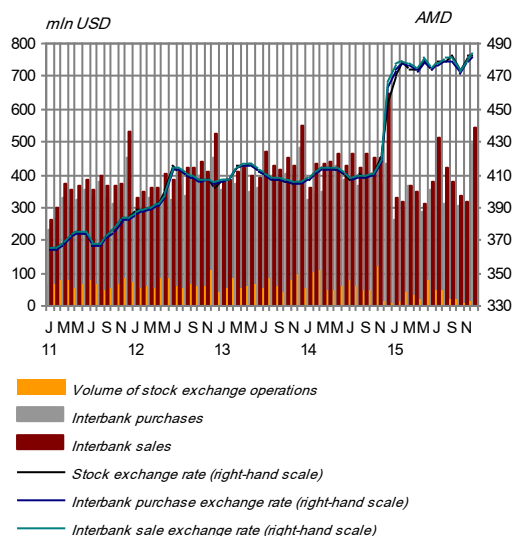
Repo transactions by investment service providers (including repo transaction with the CBA)



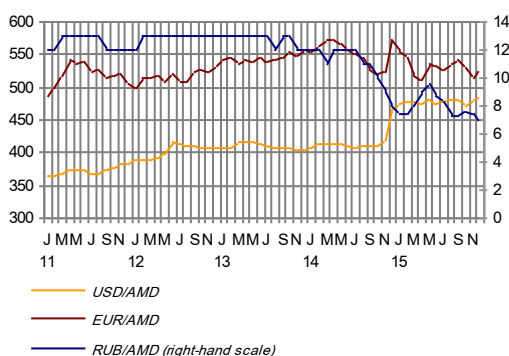
Security trades and repo transactions at regulated market of securities



Volume of operations in exchange market of Armenia and exchange rates



Exchange rates in exchange market of Armenia (AMD)



Source: Central Bank of Armenia.

Within the total trades of government securities the share of medium-term and long-term securities trades amounted to 51.1% and 32.1%, respectively. The share of short-term securities in total trades reached 16.8%.

The volume of repo and reverse repo transactions (excluding operations with the Central Bank) carried out by investment service providers has decreased by 10.7%, relative to the previous year, and amounted to AMD 2 trillion 483 billion. Again, almost all repo transactions involved government securities. Repo transactions with corporate bonds constituted a mere 0.1% in total.

In 2015, the total volume of securities trades and repo operations in regulated market amounted to AMD 33.1 billion. In the regulated market, transactions with corporate securities comprised the prevailing part, 43.0%. Trades with government securities and shares constituted, respectively, 36.5% and 20.5%.

The share of regulated market in the structure of securities trades by investment service providers has been 5.2% since the beginning of the year.

At the end of 2015, the stock market capitalization to GDP was 2.0%, increasing by 0.4 pp. compared to the previous year. The stock market overall turnover to GDP was 12.5%.

Share of 3 and 5 largest issuers' by capitalization, 2010 – 2015 (%)

Period	Capitalization of the 3 largest companies (%)	Capitalization of the 5 largest companies (%)
31.12.2010	80.1	94.7
31.12.2011	83.8	96.6
31.12.2012	78.8	96.2
31.12.2013	79.8	96.7
31.12.2014	86.5	97.2
31.12.2015	83.0	98.0

3.2. FOREIGN EXCHANGE MARKET

During 2015, there were no significant fluctuations in the foreign exchange market. At the end of 2015, the Armenian dram/ US dollar exchange rate has appreciated by 1.81% as compared to the same reference period of the previous year. The AMD exchange rate appreciated versus Euro by 9.23% and versus the Russian ruble by 23.11%.

The real and nominal effective exchange rates of Armenian dram appreciated, due to main partner countries' currency depreciations against the US dollar. In 2015, the real effective exchange rate appreciated by 6.4% compared to the last year. This was due to high depreciation rate of nominal average weighted exchange rate of the partner countries (the significant depreciation of the Russian ruble is noteworthy). The nominal effective exchange rate of Armenian dram appreciated by 10.6% compared to the previous year²⁸.

²⁸ For the exchange rate behavior and the foreign competitiveness, the nominal and real effective exchange rates are also considered, which are calculated based on the respective weights of foreign trade with twelve main partner countries (Eurozone, Russia, Ukraine, South Korea, Bulgaria, Switzerland, Iran, Georgia, Turkey, Georgia, Japan, China).

SUMMARY

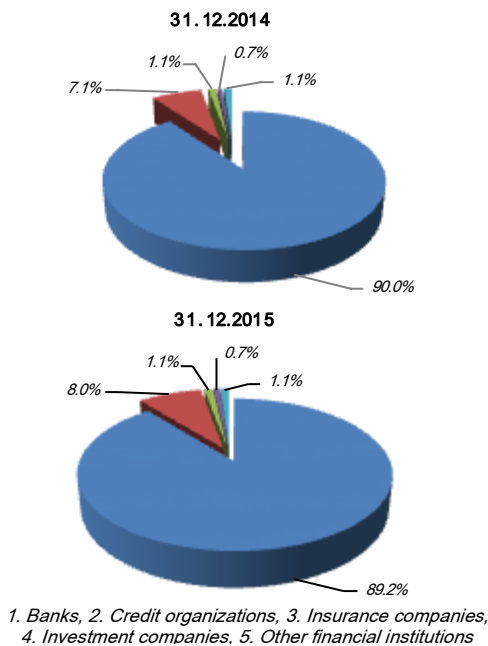
The Central bank's measures had generally expansionary direction during 2015. As a result, the policy implemented by the Central Bank impacted the financial market behavior with a decrease in interest rates.

Fluctuations in the financial markets in 2015 were moderate and did not have any material effect on the financial stability.

4. STABILITY OF FINANCIAL INSTITUTIONS OF ARMENIA

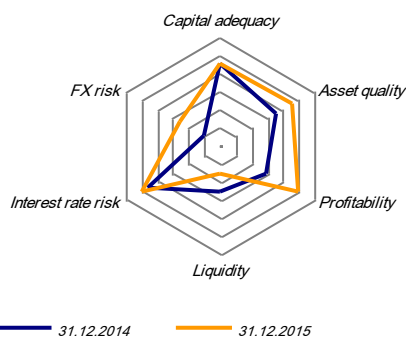
The financial system is still bank-dominated.

Structure of financial system assets, by financial institutions

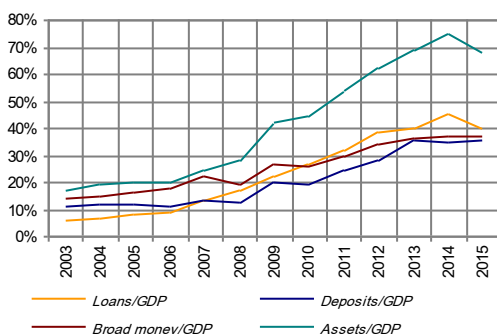


Source: Central Bank of Armenia.

Banking sector stability map



Financial intermediation



Source: Central Bank of Armenia.

Amidst some growth of economic uncertainties arising from regional developments, as well as low demand for credit resources a decline in financial intermediation was registered in 2015.

In 2015 main participants of the financial system carried out conservative credit and investment policies amid growing economic uncertainties arising from regional developments. As a result, some decline in financial intermediation was recorded²⁹.

The financial sector assets-to-GDP ratio has decreased by 7.0 percentage points to 76.8% while the credits-to-GDP ratio by 5.7 percentage points to 43.4%. Armenia's financial system remains bank-dominated, accounting for 89.2% of the financial system assets. In this context identifying and evaluating banking sector risks is essential for the assessment of the domestic financial stability. The shares of insurance and securities market participants and other players of the financial market remain small enough, so their impact on the financial stability is negligible.

4.1. COMMERCIAL BANKS

Banking sector stability map

The banking sector stability map provides a general understanding of the behavior of the banking sector stability, reflecting the change of indicators of banking risks relative to the previous period.

In the fourth quarter of 2015, relative to the fourth quarter of 2014, the elements of the stability map³⁰ incurred some changes. Some positive changes were recorded in liquidity indicators. Indicators such as assets quality, earnings, interest rate and foreign currency risks incurred negative deviations (for details, please see subsections "Credit risk", "Liquidity risk", "Market risk", "Capital adequacy and Profitability").

4.1.1. Financial intermediation and concentration

In 2015, growth rate of nominal GDP surpassed the growth rates of main indicators of the banking sector. As a result, main indicators of banking intermediation have decreased. The banking sector assets-to-GDP and credits-to-GDP ratios have fallen by 6.0 and 5.5 pp. to 68.5% and 39.8%, respectively. The ratios deposits-to-GDP (non-resident deposits included) and broad money-to-GDP grew by 0.5 and 0.2 pp. to 35.4% and 37.1%, respectively.

²⁹ The decrease of indicators describing financial intermediation was partly due to methodological changes in the calculation of nominal gross domestic product.

³⁰ The banking sector stability map contains indicators denoting capital adequacy, assets quality, liquidity, profitability, interest rate risk and foreign exchange risk. These indicators were firstly measured on a 1 to 10-scale basis and then calculated in accordance with the IMF methodology. Note that the nearer the value to the center of the map, the lower the level of risks associated with the indicator, and vice versa. The banking sector stability map shall not be interpreted as an indication of the level of financial stability, rather it provides a picture whether the level of risks involved has increased or decreased.

During the year, total capital of the banking sector grew by 9.6% (AMD 44.9 billion) while total assets by 1.4% (AMD 46.2 billion). As a result, the total capital-to-assets ratio (the leverage ratio) has increased by 1.1 percentage point to 14.9%. The increase of total capital was due to statutory capital growth. 9 banks replenished the statutory capital by a total of AMD 74.0 billion, of which 68.4 billion from external sources. As a result, non-resident participation in the statutory capital of the banking sector has increased by 1.2 percentage point to 67.7%.

Herfindahl-Hirschman Concentration Index

	31.12.12	31.12.13	31.12.14	31.12.15
Total assets	0.0787	0.0699	0.0728	0.0764
Total liabilities	0.0705	0.0727	0.0751	0.0800
Total capital	0.0637	0.0613	0.0627	0.0630

Source: Central bank of Armenia.

The Herfindahl-Hirschman Index of Concentration³¹ for main balance sheet items (assets, liabilities, total capital) denotes that concentration of the banking sector remains low, which limits the likelihood of the impact of concentration risk on the financial stability.

The share of assets, liabilities and total capital of 4 largest banks out of 22 banks³² in Armenia has increased by 1.3, 2.1 and 0.2 percentage points to 44.1%, 46.0% and 37.3%, respectively.

4.1.2. Credit risk

Credit risk remains the most important risk to the financial stability of Armenia's banking sector. The share of credit risk in risk-weighted assets of commercial banks accounts for 89.1% (as of 31.12.2014, it was at 89.9%). In this context, credit risk prudent management is extremely important.

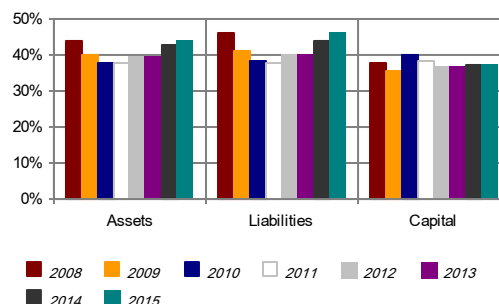
During 2015, loans to economy decreased by 3.0%. The shares of consumer loans, industry and trade credits were large in total loan portfolio, making up 20.4%, 18.7% and 16.8%, respectively.

The share of non-performing loans and receivables (classified as "watched", "substandard", and "doubtful") has grown by 1.0 percentage point to 7.4% of total loans and receivables. The shares of "watched", "substandard", and "doubtful" loans and receivables were 3.3%, 2.2% and 1.9%, respectively. (As of 31.12.2014 they were 3.1%, 1.9% and 1.4%). High credit growth reported in the previous years has considerably contributed to the deterioration of loan portfolio quality. The quality of foreign currency loans was also affected by the increase in debt burden, caused by the last-year depreciation of Armenian dram.

³¹ The Herfindahl - Hirschman Concentration Index varies between 0 and 1, characterizing the level of concentration (values near 0 denote lower concentration).

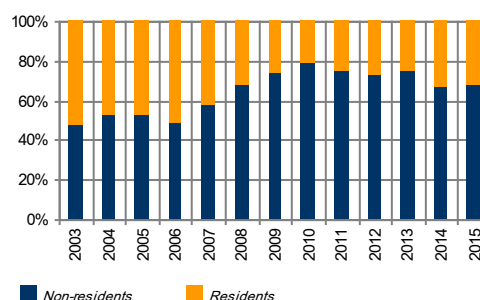
³² There are 21 commercial banks and one development bank (Pan Armenian Bank JSC) functioning in the Republic of Armenia.

Share of assets, liabilities and capital of 4 largest banks in total banking sector



Source: Central Bank of Armenia.

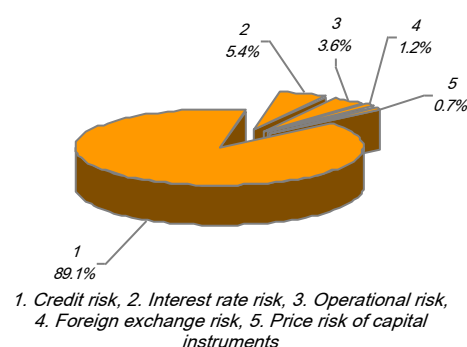
Foreign investors' participation in statutory capital of Armenian banking sector



Source: Central Bank of Armenia.

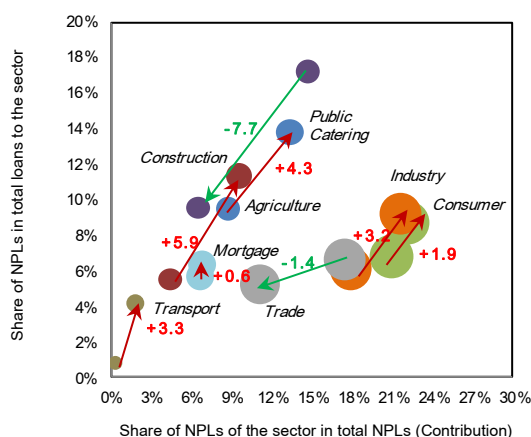
Credit risk is the key risk to the financial stability.

Structure of risk weighted assets calculated in banking sector capital adequacy index

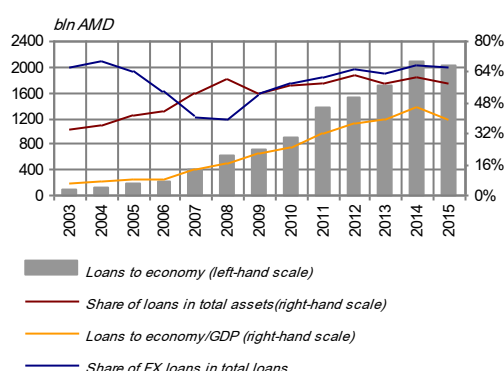


Source: Central Bank of Armenia.

Change of NPLs share in loans to economy sectors
(The end of the arrow shows data as of 31.12.2015 the beginning is as of 31.12.2014)

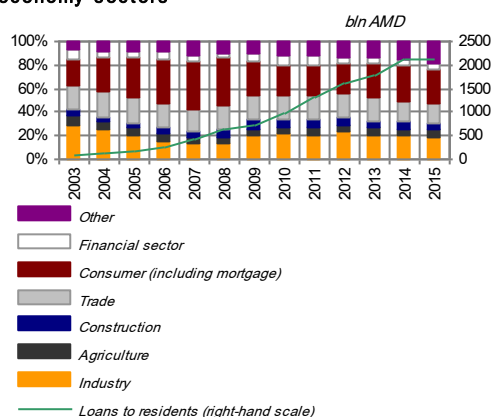


Loans to economy

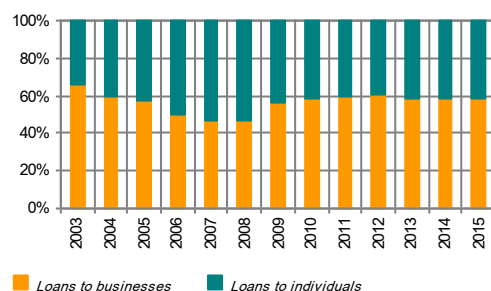


Source: Central Bank of Armenia.

Structure of bank loans to residents, by economy sectors



Share of loans to businesses and individuals in total loan portfolio



Source: Central Bank of Armenia.

During the year, the shares of non-performing loans in agriculture, public catering and service, as well as industry sectors grew significantly; by 5.9, 4.3 and 3.2 percentage points to 11.3%, 13.8% and 9.2%, respectively. As a result, the NPLs of these sectors had greater contribution to total NPLs. Relative to the previous year, the shares of non-performing loans and receivables in agriculture, public catering and service, as well as industry sectors grew by 5.1, 4.6 and 3.7 percentage points in total non-performing loans and receivables and stood at 9.5%, 13.3% and 21.7%, respectively.

The Herfindahl-Hirschman sectorial concentration index for banking lending to economy decreased by 0.01 percentage point to 0.10, which points to a moderate concentration of loans in the banking sector. The same indicator calculated using the banks' average remained unchanged and amounted to 0.18. The higher value of indicator of banks' average in comparison with the banking sector lending sectorial concentration index indicates relatively high sectorial concentration of loan portfolios in some banks.

The share of loans made to large borrowers has decreased by 1.0 percentage point to 24.9% of total loan portfolio as compared to the previous year³³.

Credit risk stress scenarios³⁴

31.12.2015	Stress scenarios		
	25 % of watched, substandard and doubtful loans classified into losses	75 % of doubtful loans classified into losses	30 % of standard loans classified into watching loans
Loss of the banking sector	AMD 29.6 billion or 6.2% of regulatory capital of the banking sector	AMD 11.4 billion or 2.4 % of regulatory capital of the banking sector	AMD 59.8 billion or 12.6% of regulatory capital of the banking sector
Total capital adequacy of the banking sector in case of stress scenario	15.3%	15.9%	14.4%

Compared to the beginning of the year, the results of credit risk stress tests conducted at the end of 2015 showed some improvement, attributable to the increase of banks' capital adequacy due to statutory capital replenishment and loan portfolio decrease. The considered stress scenario revealed cases of infringement of the capital adequacy requirement at some banks. However, these banks have sufficient capital to absorb plausible losses arising from credit risk. In this context, the probability of emergence of insolvency problems in the banking sector is estimated to be low.

³³ The bank's risk on large borrowers exceeds 5% of average monthly regulatory total capital, considering the interdependence.

³⁴ This and further stress scenarios are not forecasting emergence of any risks, but rather are aimed to reveal the weaknesses of the financial system, as well as to assess its ability to absorb such risks.

Stress scenario of credit risk derived from off-balance sheet contingent liabilities

31.12.2015	Stress scenarios
	When 50% of off-balance sheet contingent liabilities performed
Banking sector capital adequacy ratio before stress scenario	16.2%
Banking sector capital adequacy ratio in case of stress scenario	16.0%

Source: Central Bank of Armenia.

The results of stress scenario of credit risk derived from off-balance sheet contingent liabilities³⁵ denote that the capital adequacy ratio at individual banks is not plunging more than 0.5 percentage point, and no infringement of the ratio by any bank is reported. In this context, the impact of credit risk arising from off-balance sheet contingent liabilities on financial stability is estimated to be insignificant.

4.1.3. Liquidity risk

In 2015, the level of liquidity of commercial banks improved. Relative to the beginning of the year, prudential ratios of total liquidity and current liquidity have increased by 2.9 and 13.0 percentage points to 28.0% and 142.4%, respectively (with minimum thresholds of 15.0% and 60.0%). Prudential ratios of total liquidity and current liquidity for Group 1 foreign currencies have grown by 1.7 and 3.4 percentage points to 19.5% and 100.7%, respectively (with minimum thresholds of 4.0% and 10.0%). Regarding each bank individually, total liquidity and current liquidity prudential ratios were in line with regulatory requirements, and no infringement of such indicators by any bank has been reported.

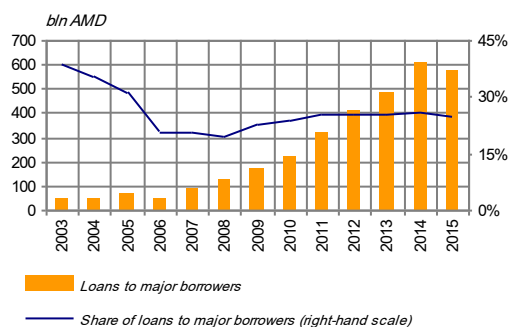
As for the assets and liabilities by maturity baskets, the liquidity position of those up to 3-month has improved³⁶. The ratios of assets to liabilities for up to 30-day (including demand) and up to 3-month maturity baskets grew by 11.2 and 6.0 percentage points to 103.5% and 95.35%, respectively³⁷.

The assets to liabilities ratio for maturity basket of up to 1-year has decreased by 0.9 percentage point to 80.5%.

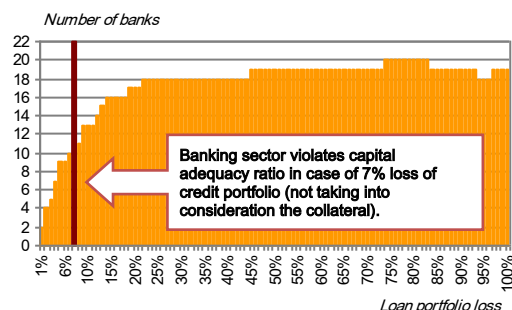
The negative liquidity gap of the latter maturity basket is due to increased maturity of loans along with deepening of financial intermediation.

The assets to liabilities ratio for up to 30-day (including demand) maturity baskets is particularly important for commercial banks in terms of maintaining their current liquidity. In the post-crisis period, the ratio has always been in the range of 90% to 110%, pointing to the banks' ability to assure current liquidity on a continuous basis.

Loans to major borrowers/total loans



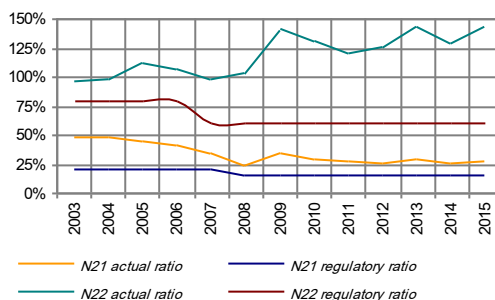
Number of banks violating capital adequacy regulatory ratio under dynamic growth of loan losses



Source: Central Bank of Armenia.

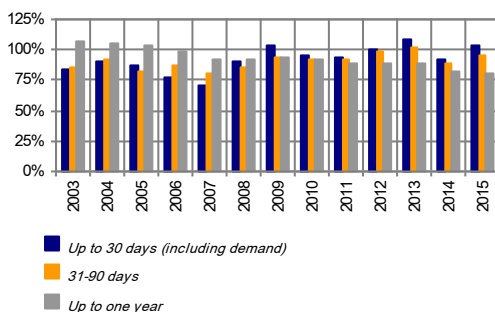
The liquidity of commercial banks has increased.

Dynamics of actual and regulatory liquidity ratios of banking sector



Source: Central Bank of Armenia.

Ratio of banking sector assets to liabilities by terms to maturity



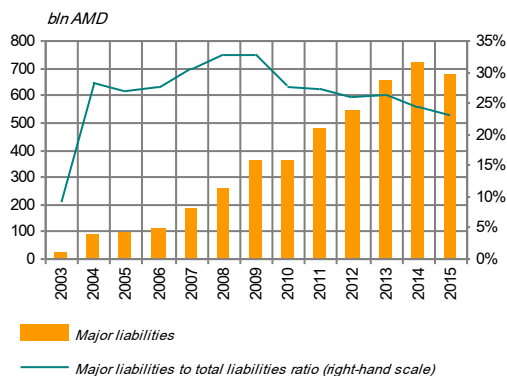
Source: Central Bank of Armenia.

³⁵ Off - balance sheet contingent liabilities include unused part of credit lines, credit cards, overdrafts, L/Cs, guarantees and sureties.

³⁶ The liquidity positions were calculated as the ratio of assets to liabilities of respective maturity baskets.

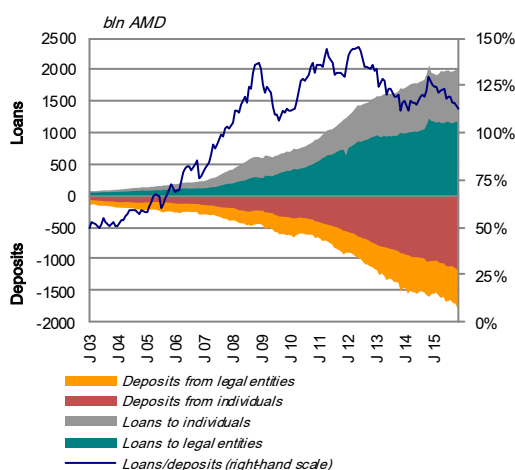
³⁷ The calculation of ratios of assets and liabilities includes off-balance sheet contingent liabilities by a 20% weight.

Ratio of banking sector major liabilities to total liabilities



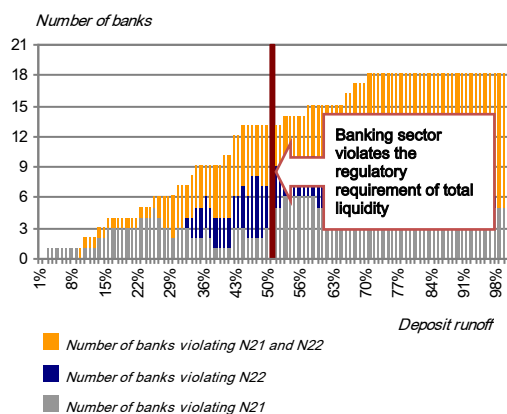
Source: Central Bank of Armenia.

Structure of loans and financing deposit funds of banking sector



Source: Central Bank of Armenia.

Number of banks violating liquidity regulatory ratios in case of individuals' call and time deposits runoff



Source: Central Bank of Armenia.

In 2015, risks to debt concentration of commercial banks have reduced: the share of large liabilities in total liabilities has contracted by 1.3 pp. to 23.0%³⁸.

During the year, foreign borrowings of commercial banks have decreased by 11.9%. Funds attracted from international financial institutions have increased by 3.2% to 35.6% of total foreign borrowings. The main lender countries include Netherlands (20.2%), Luxembourg (10.6%), the USA (8.6%) and Russia (8.0%). The share of long-term loans amounted to 93.2%, which almost excludes risks related to refinancing of such liabilities in a near-term horizon.

From the loans' financing sources stability perspective, some amelioration was noted. At the end of the year the loans to deposits ratio has decreased by 16.9 percentage points relative to the beginning of the year and stood at 112.4%³⁹.

Liquidity risk stress scenarios

31.12.2015	Stress scenarios		
	Withdrawal of 25% of individuals' time deposits	Withdrawal of 25% of demand liabilities	Withdrawal of 25% of demand liabilities and of 25% of individuals' time deposits
Total liquidity ratio of banking sector (minimum threshold is 15%)	22.0%	24.3%	17.6%
Current liquidity ratio of banking sector (minimum threshold is 60%)	103.1%	155.9%	104.1%

Relative to the results of liquidity risk stress tests conducted at the beginning of the year, there has been some amelioration in the results of stress tests. Some banks reported breaches of total and current liquidity prudential requirements in case of the worst stress scenario. However, high liquid assets in these banks are sufficient to cover the simulated outflow of liabilities. In this context, the emergence of liquidity problems undermining financial stability is estimated to be negligible.

Stress scenario of liquidity risk derived from off-balance sheet contingent liabilities

31.12.2015	Stress scenarios
	When 50% of off-balance sheet contingent liabilities performed
Banking sector total liquidity ratio (the minimum threshold is 15%)	24.8%
Banking sector current liquidity ratio (the minimum threshold is 60%)	126.0%

According to the results of stress tests to assess liquidity risk arising from off-balance sheet contingent liabilities, some banks will report infringement of prudential total and current liquidity requirements. However, high liquid assets in these banks are enough to cover contingent liabilities. In this context, the liquidity risk arising from off-balance sheet contingent liabilities is estimated insignificant in terms of leaving an impact on financial stability.

³⁸ The bank's liabilities for major creditors exceed 5% of total liabilities without considering the interconnectedness.

³⁹ In the calculation of this ratio, loans include loans (lease and factor operations inclusive) to real sector, while deposits include funds attracted from individuals and companies.

4.1.4. Market risk

Foreign exchange risk

In 2015, the Armenian dram exchange rate fluctuations against other currencies drove the domestic banking sector to revaluation gains reaching AMD 2.0 billion or 0.5% of total regulatory capital. Because of foreign currency revaluation, 12 banks reported profit and 10 banks incurred losses. The banking sector generated net revenue of AMD 17.6 billion from foreign exchange transactions.

During the year, the share of foreign currency loans has decreased by 0.8 percentage point to 66.6% of total loan portfolio. The share of foreign currency deposits has decreased by 1.3 percentage points to 71.3% of total deposit portfolio. The banking sector's foreign currency net short position (including derivatives) amounted to AMD 25.4 billion or 5.4% of total regulatory capital (as of 31.12.2014, it was AMD 25.8 million or 5.7% of total regulatory capital)⁴⁰.

Foreign exchange risk stress scenarios

31.12.2015	Stress scenarios		
	Profit (loss) in case of 5% appreciation (depreciation) of AMD/USD	Profit (loss) in case of 5% appreciation (depreciation) of AMD/EUR	Possible maximum 10-days loss estimated through VaR Model
Banking sector's profit/loss from foreign currency revaluation	AMD 1.3 billion or 0.3% of regulatory capital (AMD 1.3 bln)	AMD 70.4 billion or 0.01% of regulatory capital (AMD 70.4 bln)	AMD 730.9 million or 0.2% of regulatory capital

Source: Central Bank of Armenia.

If the worst possible stress scenarios reviewed in the above stress test⁴¹ unfold, bank losses resulting from an open FX position will be insignificant and the impact of such losses on the financial stability will be weak.

Interest rate risk

In 2015, interest rates of deposits in Armenian dram continued to grow, while those in US dollars decreased. A slight growing trend of interest rates of both AMD and USD-denominated loans was marked.

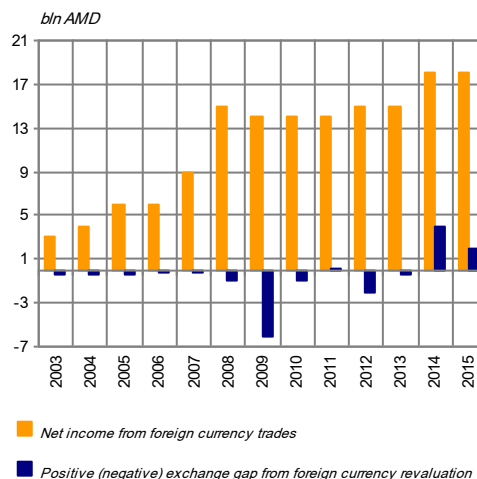
The average weighted interest rate of deposits in Armenian dram increased by 2.8 pp. whereas average weighted interest rate of deposits in USD declined by 0.4 pp. The average weighted interest rates of loans in Armenian dram and USD increased by 0.5 and 0.1 pp., respectively. Thus, the spread of interest rates of deposits and loans in AMD have decreased by 2.4 pp. while the spread of interest rates of deposits and loans in USD increased by 0.5 percentage point.

⁴⁰ Derivative instruments include the derivative contracts signed with foreign governments, central (national) banks, financial organizations and international institutions that are rated A + (A1) or higher than A+ (A1) for long-term deposits by Standard & Poor's or Fitch (Moody's)

⁴¹ The calculation of losses estimated through stress - scenarios and the VaR Model (the VaR Model is not considered as a stress - scenario) is based on FX positions of commercial banks as of 31.12.2015.

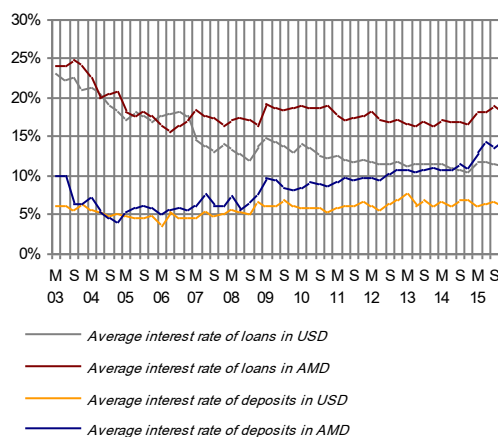
The probable influence of market risk on the financial stability is estimated to be low.

Net income of banking sector from foreign currency trades and revaluation



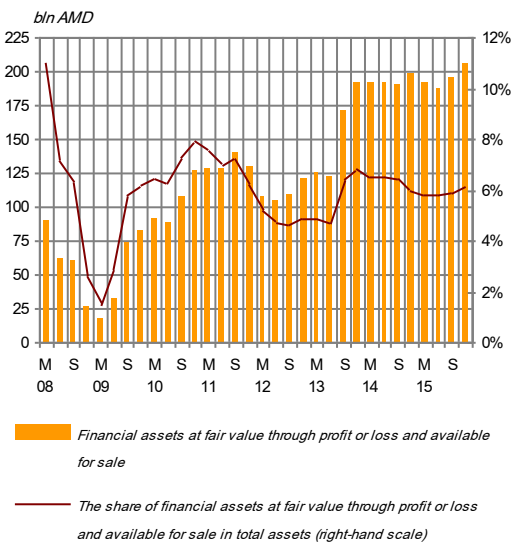
Source: Central Bank of Armenia.

Average interest rates of bank deposits and loans



Source: Central Bank of Armenia.

Share of financial assets at fair value through profit or loss and available for sale financial assets in total assets



Source: Central Bank of Armenia.

Interest rate risk stress scenarios

31.12.2015	Impact of 2 pp. increase (decrease) of market interest rates on the economic value of capital, estimated through the "Duration Method"	Deviation of net interest income from expected income of the three months ahead in case of 2 pp. increase (decrease) of market interest, estimated through the "Interest rate-sensitive assets and liabilities Gap Method"
Banking sector's profit/loss	AMD -7.7 billion or 1.6% of banking sector capital (AMD 7.7 billion or 1.6% of banking sector capital)	AMD -1.2 billion or 0.3% of banking sector capital (AMD 1.2 billion or 0.3% of banking sector capital)

Source: Central Bank of Armenia.

The average weighted duration gap of present value of assets and liabilities of the banking sector varies in the region of half a year. This means that possible fluctuations in market rates will not lead to major losses in the banking sector.

In case of worst possible stress scenarios, possible losses of banks resulting from interest rate vary in the region of 3.7% of the capital. This implies that losses of the banking sector resulting from interest rate fluctuations will not be significant and the impact of such losses on the financial stability will be weak.

Price risk

In 2015, the price risk of the banking sector remains very low. The share of financial assets available-for-sale and held at fair value through profit or loss has increased by 0.1 percentage point to 6.1% of total assets.

During the reporting year the net income generated by the banking sector from revaluation of financial assets available-for-sale and held at fair value through profit or loss was AMD 578.0 million.

Risks associated with real estate price fluctuations remained manageable. Domestic commercial banks further provided mortgages with loan-to-value ratio mostly between 60-80%, while taking quite a strict approach in evaluating borrowers' creditworthiness. Such restrictions significantly lower the possibilities of loan losses from real estate price volatilities.

Real estate price change stress scenarios

30% depreciation of real estate	31.12.2015
The banking sector's loss due to revaluation of own real estate property (price risk)	AMD 13.0 billion (or 2.7% of banking sector capital)
The banking sector's loss due to a 30% loss of vulnerable credit portfolio ⁴² (taking into consideration that the collateral involved has been sold at a depreciated cost), if a stress-scenario occurs (credit risk)	AMD 13.0 billion (or 2.7% of banking sector capital)
The banking sector's loss due to a 100% loss of vulnerable credit portfolio (taking into consideration that the collateral involved has been sold at a depreciated cost), if a stress-scenario occurs (credit risk)	AMD 43.2 billion (or 9.1% of banking sector capital)

Source: Central Bank of Armenia.

⁴² Vulnerable loan portfolio represents the sum of loans outstanding, the residual values of which exceed the 30% devaluated values of the real estate used as collateral.

In case of stress scenario of 30% depreciation of real estate price, maximum potential losses of commercial banks associated with price risk and credit risk derived from the price risk have increased compared to the previous year. This is mainly attributable to the increase in the loan-to-value ratio of real estate secured lending.

However, real estate price fluctuations are not high (taking into account the last 5 years' developments) and the impact of credit and price risks to financial stability is assessed non-vulnerable.

4.1.5. Capital adequacy and profitability

In 2015, commercial banks' total capital adequacy ratio rose by 1.7 percentage point to 16.2%. Individual banks kept their total capital adequacy prudential indicators higher than the minimum prudential requirement of 12.0%, so no bank reported breaches of capital adequacy requirements. The improvement of total capital adequacy at banks was driven by the replenishment of statutory capital and attraction of long-term subordinated loans, as well as reduction in foreign exchange risk. The deterioration of loan portfolio quality and the increase of some components of risk-weighted assets have negatively influenced capital adequacy.

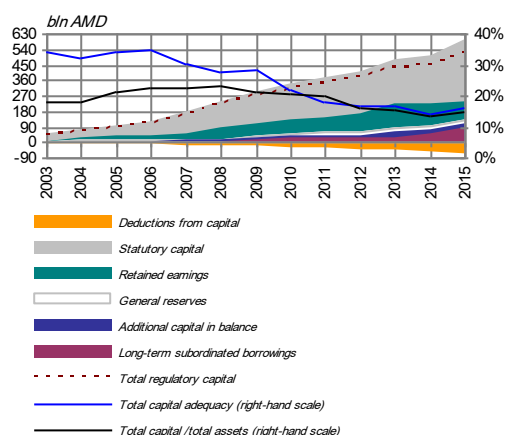
Total regulatory capital of commercial banks has grown by 4.9% to AMD 475.0 billion relative to the beginning of the year. In terms of risks absorption capacity, the quality of total regulatory capital structure is high. The share of Tier 1 capital is 86.2% of total regulatory capital (at the end of the previous year, it was 87.5%).

The banking sector net profit, calculated in accordance with International Financial Reporting Standards (IFRS), amounted to AMD 17.7 billion, while the return on assets (ROA) was 0.5 percent and return on equity (ROE) was 3.5 percent, in 2015.

In 2015, banking sector operated at a loss, calculated in accordance with the Central Bank supervisory reports⁴³, which amounted to AMD 20.7 billion, with 15 banks reporting net profit and 7 banks incurring losses. ROA and ROE ratios of the banking sector were -0.6% and -4.3%, respectively (0.7% and 4.5% in the previous year).

The return on assets decreased mainly due to 1.0 pp. increase in net asset loss provisioning-to-assets ratio, as well as 0.8 pp. decrease of net interest margin as a result of yield spread narrowing. The 0.4 pp. increase of net non-interest income/assets ratio, amidst non-interest expense contraction, influenced positively the return on assets.

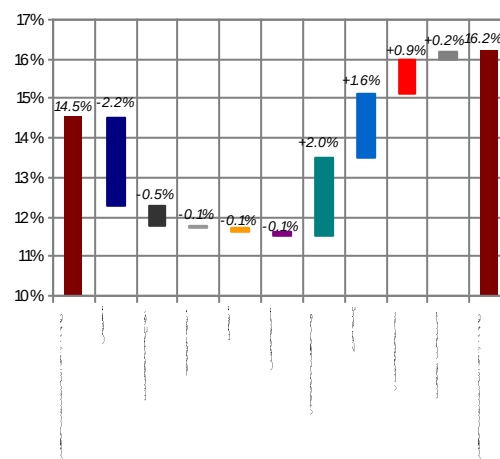
Structure of total regulatory capital



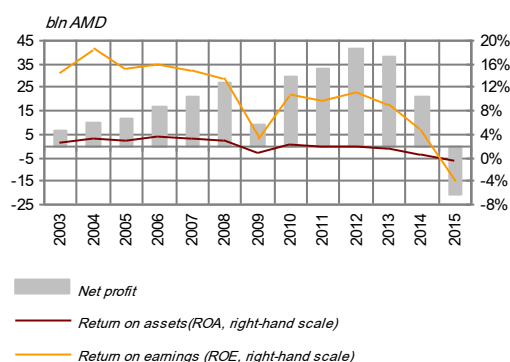
Source: Central Bank of Armenia.

Capital adequacy of commercial banks tend to improve.

Total capital adequacy of banks-Waterfall



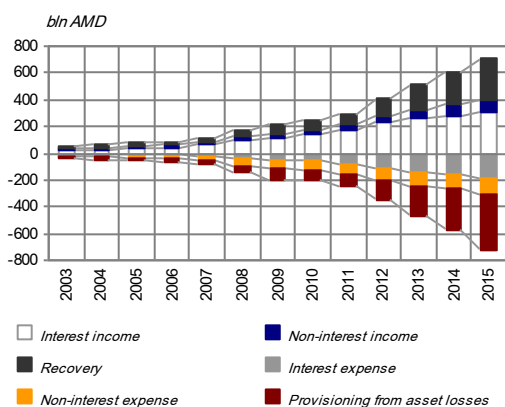
Profitability ratios of banking sector



Source: Central Bank of Armenia.

⁴³ This differs from IFRS mainly on the part of loan loss provisioning for standard assets.

Income and expenses of banking sector



Source: Central Bank of Armenia.

The shares of interest income and non-interest expense decreased in the banking sector income and expenditure structure, while the shares of recoveries from asset loss provisions and allocations for asset loss provisions increased. These structural changes are due to a decrease in loan repayment and an increase in cost of funding.

4.2. CREDIT ORGANIZATIONS

Credit organizations represent the second largest sector of Armenia's financial system, with their assets making up 8.0% of financial system. During the year, the assets, liabilities and total capital of credit organizations increased.

Assets, liabilities, capital and profit of credit organizations

(thousand AMD)

Indicator	31.12.2014	31.12.2015	Growth (%)
Assets	269,156,880	308,627,870	14.7%
Liabilities	159,508,741	176,420,773	10.6%
Capital	109,648,139	132,207,097	20.6%
Net profit	9,861,000	10,331,546	4.8%

Source: Central Bank of Armenia.

In 2015, total capital of credit organizations demonstrated growth rate outpacing that of total assets by 5.9 percentage points. As a result, the total capital-to-assets ratio (leverage ratio) has increased by 2.1 percentage points to 42.8%.

Profit of credit organizations, calculated in accordance with International Financial Reporting Standards (IFRS), totaled AMD 10.2 billion, with return on assets (ROA) and return on equity (ROE) having reached 3.4% and 7.5%, respectively.

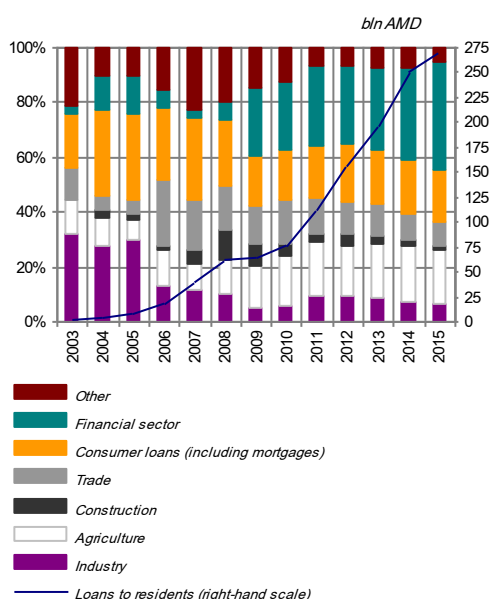
During the year, 24 credit organizations posted profit and 8 reported losses, calculated in accordance with the Central Bank supervisory reports. The ROA and ROE of credit organizations have decreased by 0.5 and 1.8 percentage points relative to the previous year to 3.6% and 10.3%, respectively.

The share of non-performing loans and receivables has grown by 0.4 percentage point to 6.6% of total loan portfolio and receivables. The shares of non-performing loans and receivables are relatively high in consumer loans, loans to agriculture and trade sectors, amounting to 18.0%, 11.1% and 10.2%, respectively.

Relative to the previous year, the ratio of net asset loss provisions to total assets has grown by 1.9 pp. to 2.5%.

In all maturity time bands of assets and liabilities (up to 180-days (including demand instruments), from 180-days to 1-year, more than 1-year), the amount of assets was in excess of the amount of liabilities. This is a clear indication, all other factors being equal, that the level of liquidity risk of credit organizations is low.

Balance of loans to residents by credit organizations, by sectors



Source: Central Bank of Armenia.

Credit risk assessment stress scenarios⁴⁴

31.12.2015	Stress scenarios		
	25 % of loans in watched, substandard and doubtful categories classified into loss loans	75 % of loans in doubtful category classified into loss loans	30 % of loans in standard category classified into watched loans
Total loss of credit organizations	AMD 3.4 billion or 2.3% of regulatory capital	AMD 1.0 billion or 0.8% of regulatory capital	AMD 6.7 billion or 5.0% of regulatory capital

Source: Central Bank of Armenia.

According to various stress scenarios, credit organizations are fully capable to absorb potential risks.

4.3. INSURANCE COMPANIES

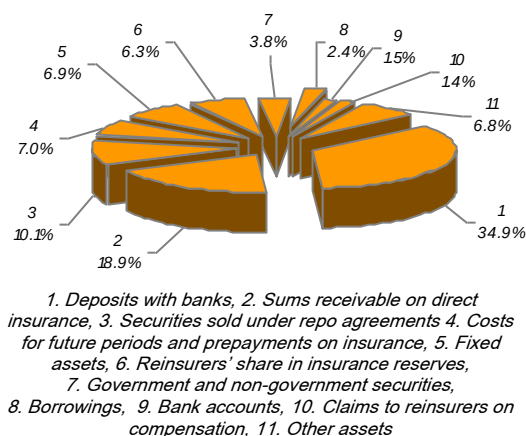
At the end of 2015, there were eight insurance companies licensed to perform insurance business in the Republic of Armenia⁴⁵.

In 2015, the amount of assets of insurance companies reduced by 5.3% to AMD 41.1 billion and the amount of liabilities decreased by 12.0% to AMD 24.3 billion. Total capital has increased by 6.5% to AMD 16.8 billion. As of end of 2015, the share of insurance companies in the financial system remained unchanged, 1.1% of total assets of the financial system. The amount of premiums written, the main indicator of insurance activity, has increased by 4.4% as compared to the same period of the previous year to AMD 31.4 billion (this indicator have fallen by 15.8% during the previous year).

The premium to GDP ratio, another key indicator of insurance companies, was 0.62% at the end of 2015, which has fallen by 0.03 percentage point in relation to 2014⁴⁶. In 2015, the premium per capita ratio was AMD 10,457 versus AMD 9,982 reported in 2014.

In 2015, the loss ratio of insurance companies has reduced by 4.8 percentage points to 48.9%⁴⁷. The insurance companies' expense ratio⁴⁸ has increased by 0.4 percentage point in relation to the previous year to 29.8%.

Insurance sector assets, as of 31.12.2015



Source: Central Bank of Armenia.

⁴⁴ Stress scenarios are built on an assumption that the amounts of loans of credit organizations are unchanged and the secured property is ignored (which means when loans are classified as loss, a possible sale of the collateral is not considered).

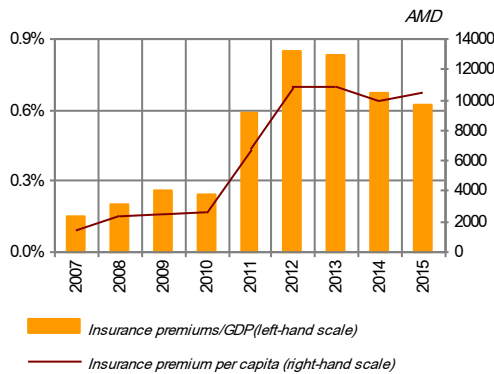
⁴⁵ As of 31.12.2015, this section collates indicators of 7 insurance companies active and reportable, since one company, although duly licensed, does not carry out insurance activities.

⁴⁶ Based on the 2014 data, the premiums to GDP ratio on non-life insurance was 3.51% on average in developed industrial countries and 1.35% in emerging market countries (source: Swiss Re, Sigma No 4/2015, May 2015).

⁴⁷ The loss ratio has been calculated using the following formula: (net accrued indemnity + changes of reserves of net claims + regulatory costs) / (net accrued insurance premiums – sums refunded on the contracts terminated – UIPR change).

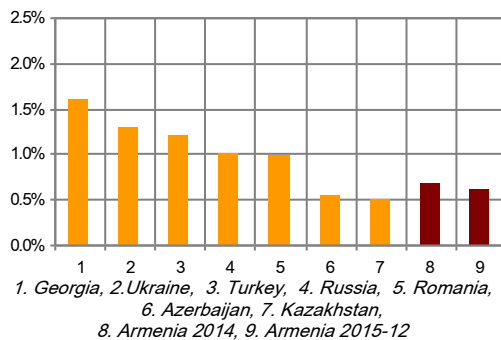
⁴⁸ The expense ratio has been calculated using the following formula: non - interest expenses / (net accrued insurance premiums – sums refunded on the contracts terminated – UIPR change).

Main ratios of insurance sector



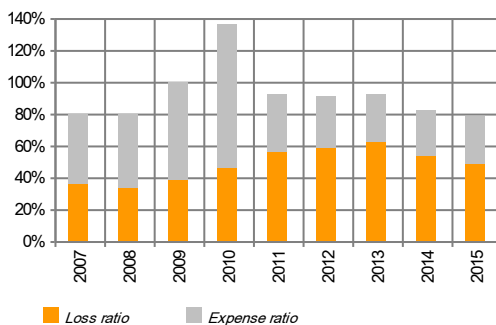
Source: Central Bank of Armenia.

Insurance premium/ GDP in EEC and CIS (2014)



Source: Central bank of Armenia, Swiss Re, Sigma No 4/2015.

Loss and expense ratios of insurance sector



Source: Central Bank of Armenia.

The shares of risk-weighted assets and required solvency in the insurance sector's capital adequacy ratio were 37.0 percent and 63.0 percent, respectively. The regulatory capital adequacy ratio of the insurance sector was 185.2% at the end of 2015 (the marginal value of regulatory capital adequacy is 100%).

Solvency risk

The change in solvency levels of insurance companies was assessed in case if stress-scenarios shown below unfold (a 10.0% rise in the indemnification rate and a 5.0% growth of insurance payments). Results suggest that the level of solvency will not incur notable changes, so the likelihood of risks undermining financial stability in the insurance sector is very low.

Solvency assessment stress scenarios

31.12.2015	Stress scenarios	
	Growth of reimbursement rates, 10%, and insurance payments increase, 5 %	Shocking growth of reported but not settled losses, 25%
Required growth of UIPR of the insurance sector, if the stress scenario occurs	AMD 1.0 billion or 5.1% of regulatory capital of the sector	AMD 0.4 billion or 2.0% of regulatory capital of the sector
Total capital adequacy ratio of the insurance sector, if the stress scenario occurs	175.7%	181.5%

Source: Central Bank of Armenia.

Credit risk

Allocating funds of the insurance sector in low-risk assets allows keeping the investment risk at a low level. Assets equivalent to technical reserves are invested primarily in time and demand deposits with commercial banks as well as government and non-government bonds.

Credit risk assessment stress scenarios

31.12.2015	Stress scenarios	
	Classifying 30% of "standard" assets into "watched" category	Classifying 5% of "standard" assets into "loss" category
Loss of the insurance sector	AMD 0.7 billion or 3.7% of regulatory capital	AMD 1.3 billion or 6.9% of regulatory capital
The total capital adequacy ratio of the insurance sector, if the stress scenario occurs	179.8%	175.1%

Source: Central Bank of Armenia.

The results of the stress tests of credit risk assessment show that potential loss of the insurance sector is low.

Foreign exchange risk

The results of foreign exchange stress scenario suggest that the loss of insurance companies resulting from foreign exchange risk is not considerable.

Foreign exchange risk assessment stress scenarios⁴⁹

31.12.2015	Stress scenarios		
	Gain (loss) in case of 5% AMD appreciation (depreciation) versus USD	Gain (loss) in case of 5% AMD appreciation (depreciation) versus EUR	Maximum potential 10-day loss valued through VaR method
Insurance sector's gain/loss in case of foreign exchange revaluation	AMD 150.3 mln or 0.8% of regulatory capital (AMD -150.3 mln)	AMD 2.3 mln or 0.01% of regulatory capital (AMD -2.3 mln)	AMD 191.9 mln or 1.0% of regulatory capital

Source: Central Bank of Armenia.

Liquidity risk

The level of liquidity risk in the insurance sector is low, which can be seen through the results of the stress scenario.

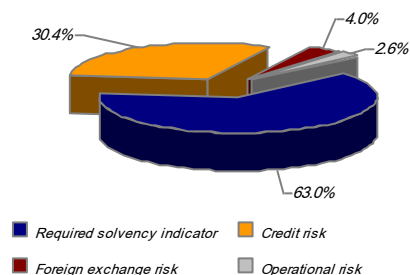
Liquidity risk assessment stress scenario

31.12.2015	Stress scenarios
	Sharp increase of outstanding claims reserves, 25%
Required growth of outstanding claims reserves when the stress scenario occurs	AMD 0.4 billion or 2.0% of regulatory capital
Liquidity of insurance companies when the stress scenario occurs	658.7%

Source: Central Bank of Armenia.

Overall, the share of insurance sector in the financial system remains small. Risks to insurance companies are controllable and non-vulnerable in the financial stability point of view.

Share of risk weighted assets and required solvency in insurance sector capital adequacy ratio, as of 31.12.2015



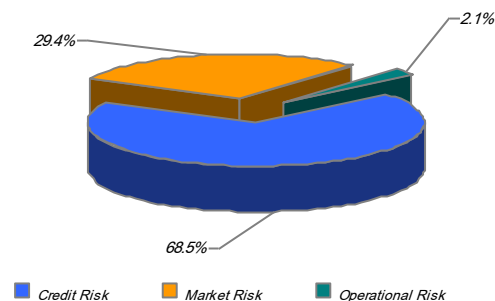
Source: Central Bank of Armenia.

4.4. SECURITIES MARKET PARTICIPANTS

27 classes of securities of 16 reporting issuers were admitted to trading in the regulated market. One issuer was accountable on both shares and bonds. The share of equity securities issued by three commercial banks was 42.3% of total issuance of securities, while the share of bonds issued by two commercial banks was 45.6% of total issuance of bonds. Total amount of shares was AMD 31.3 billion and total amount of bonds, AMD 17.9 billion. 9 of these 16 bonds were in foreign currency with their share making up 56.9%.

As of December 2015, there were 21 banks providing investment services and 8 investment companies in the security market of Armenia. Four asset managers are registered in the financial market of Armenia, two of which have a mandatory pension fund rights, one is a voluntary pension and investment fund, and the other has investment fund management right only.

Structure of assets in capital adequacy ratio of investment companies as of 31.12.2015



Source: Central Bank of Armenia.

⁴⁹ The calculation of losses estimated through stress - scenarios and the VaR Model (the VaR Model is not considered as a stress - scenario since the calculation of the model considers historical exchange rate series of currencies) makes an assumption that FX position of insurance companies would not change in a 10 - day time - span.

At the end of 2015, relative to the previous yearend, total assets of investment companies have increased by 12.8% and amounted to AMD 28.7 billion, and total capital has reduced by 16.2% to AMD 4.1 billion. Total profit of investment companies has been AMD 164.0 million. Moreover, five companies posted profit and three incurred losses.

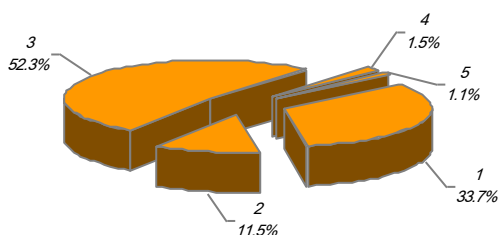
As of 31.12.2015, credit risk of investment companies accounted for 68.5% of risk-weighted assets, market risk constituted 29.4% and operational risk, 2.1%. Remarkably, interest rate risk had the largest share in market risk of investment companies (81.3%), while foreign exchange and share price risks constituted 14.6% and 4.1%, respectively. The capital adequacy of investment companies is much higher than the required minimum level, and the abovementioned risks are manageable.

The investment companies have low-risk level activity in terms of financial stability vulnerability.

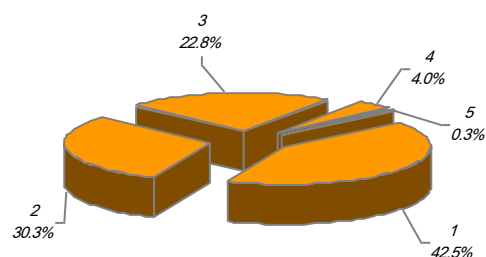
4.5. MANDATORY PENSION FUNDS

As of end 2015, there were 2 investment fund managers with permission to operate as mandatory pension fund managers in Armenia. Each of the two manages three mandatory pension funds.

Pension fund investments as of 31.12.2014



Pension fund investments as of 31.12.2015



1. RA Government bonds, 2. Equity shares, 3. Funds and deposits 4. Other bonds, 5. Other assets

Source: Central Bank of Armenia.

Net Asset Value - NAV of Mandatory pension funds as of 31.12.2015

Name of the manager	Name of the pension fund	Net asset value (NAV)
AMUNDI-ACBA Asset Management Armenia CJSC	Balanced fund	AMD 538.0 million
	Conservative fund	AMD 15.4 billion
	Fixed income fund	AMD 296.0 million
C-QUADRAT AMPEGA Asset Management Armenia LLC	Balanced fund	AMD 199.0 million
	Conservative fund	AMD 15.0 billion
	Fixed income fund	AMD 122.0 million

Source: Central Bank of Armenia.

At the end of 2015, the net asset value of pension funds was AMD 31.5 billion, while net assets-to-GDP was 0.62%.

As of the end of the year, there were 140,000 active participants in pension funds.

During 2014, the pension fund managers preferred to keep their funds in more liquid and profitable assets (cash and deposits). In 2015, the share of cash and deposits has decreased, due to an increase in shares of government and non-government bonds and equity shares, which further diversified the investments.

The share of foreign exchange assets of the funds was 33.1% or AMD 10.4 billion, the majority of which (AMD 9.6 billion) were equity shares.

The profitability of pension funds was 5.3% in 2015. Since 2014 the cumulative profitability for two years has been 10.0%.

The 42.5% of funds' actives, which constitute AMD 13.0 billion, were invested in Armenian government bonds. The investments in Armenian government Eurobonds were AMD 357.0 million. The average weighted maturity of government bonds in the assets of pension funds is 5 years, and the average weighted profitability is 15.2%.

SUMMARY

In 2015, some increase in credit risk was recorded due to the deterioration of the quality of the loan portfolio. However, the capital adequacy of banks significantly improved owing to replenishment of statutory capital by commercial banks. This has significantly contributed to financial stability.

Some growth was registered in banking sector liquidity and stability of funding sources for loan portfolio under the conditions of ongoing growth rates of deposits and fall in lending.

Non-bank financial institutions underwent volumetric expansion, while the regulatory indicators were maintained within required limits.

5. FINANCIAL MARKET INFRASTRUCTURES STABILITY

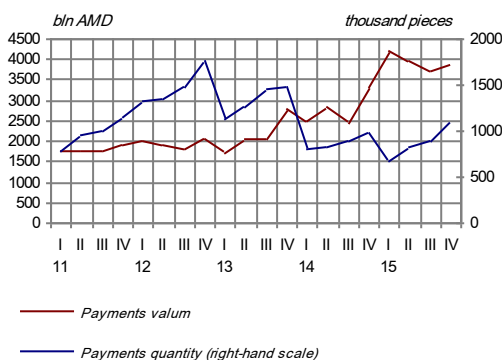
Given the importance and the impact of payment and settlement system on the monetary policy and financial stability of Armenia, the Central Bank further pays due attention to the country's systemically important payment and securities settlement systems and the telecommunication network supporting their activities.

In Armenia, over 99 percent of interbank settlements are made via the Central Bank systems⁵⁰.

5.1. INTERBANK PAYMENTS VIA ELECTRONIC PAYMENT SYSTEM OF THE CENTRAL BANK

The results of monitoring of the EPS functioning suggest that the system is safe and does not create problems in terms of stability.

**Payments by Electronic Payment System
(without exchange market transactions)**



Source: Central Bank of Armenia.

In 2015, there were about 3.5 million payments (payment messages), totaling AMD 15744.3 billion, executed via the Electronic Payment System (EPS) of the Central Bank of Armenia.

In the period under review, the value of payments kept on growing while the number of payment messages has plunged sharply in the first quarter, but resumed and registered a quick pace of growth afterwards.

The operations with the Central bank (mostly repurchase agreements) affected considerably the increase of EPS payments by value, which was due to amendments in the regulatory framework of reserve requirements of the Central bank's monetary policy starting from November 2014.

The interbank payments have an important impact on the dynamics of number of EPS payments, as the majority of those payments are done by a single message type, while the number of operations with the Central bank is small and constitutes an insignificant part of total payments.

The risks in the system are reviewed separately for each area described below.

Credit risk

Credit risk to the settlement bank (i.e. the Central Bank of Armenia) in the system is non-existent since the participant can use an intraday repo instrument in case of insufficient funds on their correspondent account, which is secured by government bonds of the Republic of Armenia, securities of the Central Bank of Armenia, and/or high-rated corporate bonds. The size of the attracted fund is calculated using the percentage subtracted from the market value of the bond (haircut). Nor is there credit risk to the recipient as it receives the notice of the payment only after the payment is made final and irrevocable⁵¹.

There is no credit risk identified in the EPS.

⁵⁰ Payments via the Central Bank systems involve EPS payments without stock exchange trades, also transactions concerning the CBA indirect monetary instruments, the Central Bank's internal payments, as well as final settlements of ArCa cards system and the cash leg of the transactions of the Government Securities Accounting and Settlement System (GSASS). For details, please see the paper "Payments and Securities Settlement Systems in the Republic of Armenia", 2010.

⁵¹ For details, please see the "Financial Stability Report", 2007, and the paper "Payments and Securities Clearance and Settlement Systems in the Republic of Armenia", 2010.

Liquidity risk

In the period under review the daily average indicator of own liquidity used for assessment of liquidity risk⁵² was 3.7, reaching to 4.7 in November. This unprecedented high level was due to amendments in the regulatory framework of reserve requirements implemented in December 2014. As a result, the liquidity held in AMD correspondent accounts of banks with the Central bank notably increased. At the beginning of the reported period, the value of payments recorded a steady trend, though some decrease was noted during the last two months. The aforementioned resulted in a significant rise of own liquidity indicator, having a positive impact on the management of liquidity risk in the system.

In assessing the liquidity risk, it should be noted that the calculation of the abovementioned indicator does not include incoming payments (crediting of the account) and/or funds from other sources to increase liquidity.

The above indicator was monitored across individual banks as well, and the results of the monitoring suggest that the likelihood of liquidity risk is estimated to be minimal.

Reported rejections in the system and their share in total payments made through the system are also important measures for the assessment of the liquidity risk.

The number of rejections due to insufficient liquidity as well as its share in the EPS payments remains negligible – a maximum of 0.2% by value and 0.03% by number.

These rejections are merely due to individual cases and may be a result of improper management of liquidity (payment flows) by the participants, so this could not affect the liquidity of the system.

Intraday distribution of payments

In the reported period, 26.3% of the value and 18.7% of the number of payments were settled during the peak hours (10:00-11:00 and 15:00-16:00, respectively).

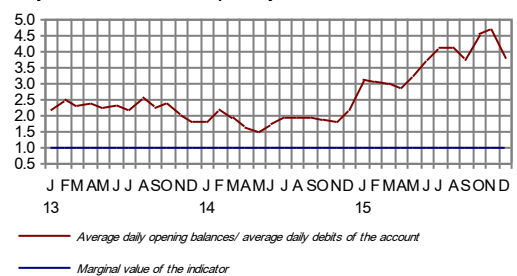
Despite some smoothening in intraday distribution of payments, 2 peak hours for value of payments remain in the system (at the beginning of the operational day, during two hours, from 10:00 to 12:00, 43.8% of total value of payments). It is noteworthy that, compared with previous years, the second peak hour in terms of value was shifted from the end of the operational day (16.6% from 15:00 to 16:00, while in 2015 only 14.1%) to the first half of the day (from 11:00 to 12:00).

Some flattening was noted also in patterns of intraday distribution in terms of the number of payments, which was due to perceptible changes recorded in the end of the reporting period. The share of the peak hour of the previous period (from 10:00 to 11:00) decreased by 4.0pp. in the fourth quarter constituting 14.9% of the number of payments, thus leading to almost equal hourly distribution of payments during the day. As a result, almost

⁵² The daily average indicator of own liquidity is calculated on the basis of a ratio of opening liquidity on dram correspondent accounts of commercial banks to debits (payments) through the account. Incoming payments are not included in the indicator so that a stress-scenario can assess the likelihood of bank rejections if additional liquidity is not available within a day, namely to which extent would banks generate their payments using only opening balances of their own funds. The calculation does not include cash enhancements through their own accounts of commercial banks. The indicator is calculated for a system level (aggregate for all banks), so indicators may vary across commercial banks.

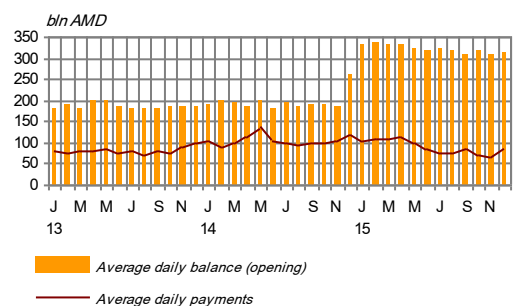
The likelihood of emergence of liquidity risk and systemic problems in the EPS is negligible.

Dynamics of own liquidity indicator



Source: Central Bank of Armenia.

Average daily payments and average daily opening balances (by all banks)

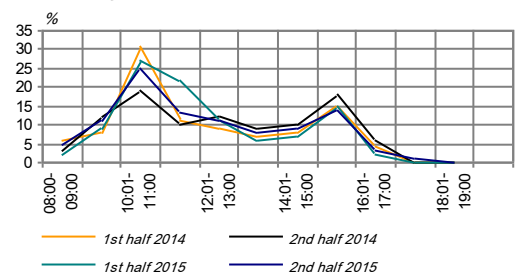


Source: Central Bank of Armenia.

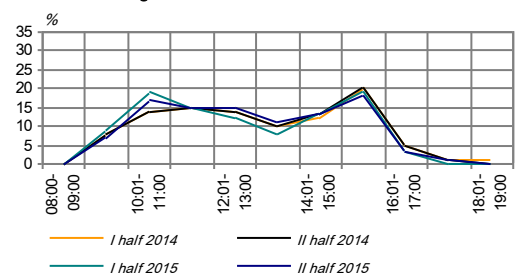
The rejections due to insufficient liquidity are negligible.

Some concentrations during certain hours of the day did not pose problems.

Intraday distribution of value of payments on an average semiannual basis



Intraday distribution of number of payments on an average semiannual basis



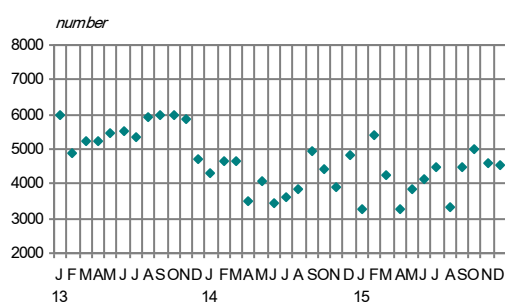
Source: Central Bank of Armenia.

the same share of the number of payments takes place during each time interval and only one peak hour remained in the fourth quarter: 17.3% of the number of payments settled during the last hour of the operational day

Taking into consideration these trends, as well as due to the sufficient level of system capacity, positive outcomes of liquidity and operational availability indicators and negligible share of rejections in total payments (for details, please see the previous subsections), it is worth mentioning that the uneven distribution and concentration of payments during certain hours of the day did not lead to problems and the likelihood of emergence of risk to the system is generally low in 2015.

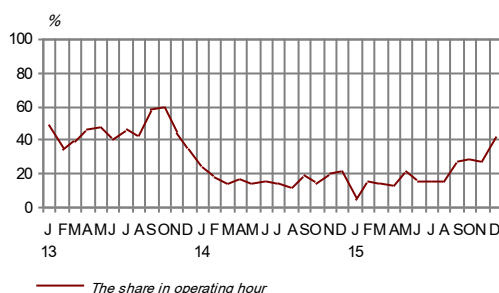
During the reported period, hourly payments increased but the probability of risk emergence to the system capacity is low, overall.

Maximum number of payments per hour, by month

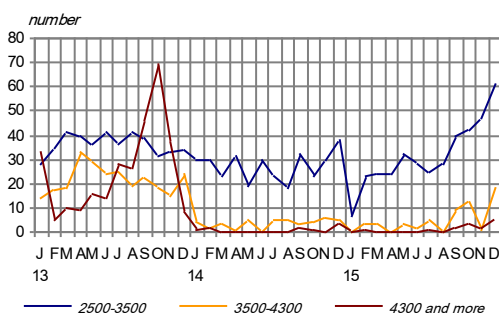


Source: Central Bank of Armenia.

Dynamics of 2500 and more payments per hour and share in operating hour in the given month



Dynamics of payments exceeding the threshold of 2500, 3500 and 4300 payments per hour



Source: Central Bank of Armenia.

System capacity

In 2015, the hourly maximum of payment flow by months (the maximum number of payments per hour of each month) remained at the same level in general, although the number of payments settled during the highest peak hour of the year increased. The maximum hourly indicator grew to 5419 payments per hour against 4917 payments/hour in 2014. The peak hour was recorded in February, from 10:00 to 11:00, making up 26.4% of the number and 6.1% of the value of the day's payments.

The maximum daily indicator (number of payments per day) remained at the same level; 26245, against 26028 payments/day in 2014.

The shares of all marginal indicators (showing the significant flow of payments per hour) have increased. In particular, the 2500-3500 payments per hour ratio grew significantly (more than 60 cases in December).

Taking into account that the minimum potential capacity indicator registered in the system is higher than 6000 payments per hour, and that cases of the abovementioned levels have a small share in total payments flow, the increase of payments per hour had no negative effect and the probability of emergence of capacity-related risks is estimated to be low.

Operational availability of the system

In 2015, no significant incidents affecting the operational availability of the EPS were reported. As a result, the operational availability of the EPS has been 99.8% for the period under review. This is quite a high indicator and is in line with the service level defined by the operator⁵³.

Only one incident related to the connection failure of BankMail component with the applications was somehow significant (with duration of about one hour). Because of this incident the start of the operational day was extended. The problem was quickly solved. A transition to the reserve option was implemented and the regular operation of the system was restored. This failure had some impact on the deponation procedure of stock exchange transactions of some participants, but the operational day was closed on time.

⁵³ According to the EPS participation agreement the operational availability of the system should be at least 98.0% yearly.

5. 2. SECURITIES ACCOUNTING SYSTEMS

In Armenia, the settlement of securities is done through two systems: Securities Accounting and Settlement System of the Central Depository of Armenia (hereinafter CDA's SSS) and Government Securities Accounting and Settlement System (hereinafter GSASS).

In 2015, transfers related to secondary market transactions, totaling more than AMD 6,299.3 billion of nominal value, were carried out through GSASS (AMD 5,688.9 billion in 2014), which represented an increase of 11.0% in relation to the previous year. Meanwhile, transfers related to secondary market transactions totaling more than AMD 1,182.6 billion of nominal value were carried out through CDA's SSS, which represented a 4.2 times increase in relation to the previous year. This sharp growth was due to harsh increase of OTC transactions with corporate bonds and Eurobonds issued on the name of RA.

In 2015, the transfers executed through GSASS accounted for 84.2 percent of transfers related to secondary market transactions executed totally via securities settlement systems. Thus, in the financial stability point of view, GSASS is of crucial importance and remains a systemically important system.

In GSASS, the settlement of OTC transactions is assured by the principle "delivery versus payment" (DVP), while regulated market transactions are executed through a procedure of pre-depositing of securities and cash, thereby excluding counterparty risk. No credit risk may emerge due to the usage of gross settlement and irrevocability principles in the system.

Transfers of securities through the Government Securities Accounting and Settlement System of the Central Bank pertaining to the operations with securities in the secondary market⁵⁴

	2013	2014	2015
Nominal value of transfers related to OTC market transactions (AMD billion)	3,879.4	5,656.7	6,285.5
Number of transfers related to OTC market transactions	23,970	26,509	32,154
Nominal value of transfers related to regulated market transactions (AMD billion)	14.9	32.2	13.7
Number of transfers related to regulated market transactions	484	920	325
Total nominal value of transfers of securities (AMD billion)	3,894.1	5,688.9	6,299.3
Total number of transfers of securities	24,454	27,429	32,479

⁵⁴ To avoid double accounting, the statistical information provided excludes transfers via CDA investors aggregated depo accounts.

Transfers of securities through the Securities Accounting and Settlement System of the Central Depository of Armenia pertaining to the operations with securities in the secondary market⁵⁵

	2013	2014	2015
Nominal value of transfers related to OTC market transactions (AMD billion)	66.8	272.1	1,179.3
Number of transfers related to OTC market transactions	1,313	1,234	2,682
Nominal value of transfers related to regulated market transactions (AMD billion)	4.9	7.0	3.3
Number of transfers related to regulated market transactions	248	570	366
Total nominal value of transfers of securities (AMD billion)	71.8	279.1	1,182.6
Total number of transfers of securities	1,561	1,804	3,048

In 2015, there were 2 significant incidents (with duration of more than 1 hour) which influenced the uninterrupted functioning of GSASS.

The first incident was because of some adjustment shortcomings of applications during the transition to the reserve server. The result was a delay of primary auction for about 1 hour. The second incident was related to a technical problem occurred in the server, thus the infrastructure operation of the secondary market of GSASS was interrupted for one hour.

The causes of the abovementioned incidents were eliminated and they had no significant impact on the operation of the system and the participants. The operational availability of GSASS primary and the secondary market subsystems was 99.95%.

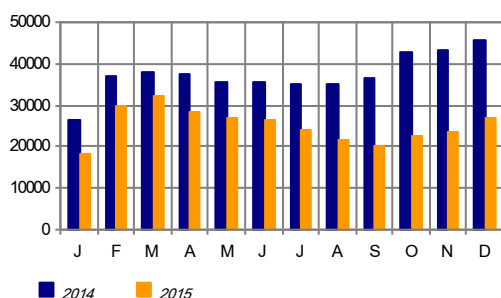
Given the abovementioned, the GSASS is assessed as reliable and safe.

5. 3. CREDIT REGISTRY AND ACRA CREDIT BUREAU

The Credit Registry

The Credit Registry has been functioning within the structure of the statistical department of the Central Bank of the Republic of Armenia since January 1, 2003. The Credit Registry is designed to collect reliable data for effective monitoring and analysis. The Credit Registry keeps record of loans in excess of AMD 1.5 million and loans of all amounts that were overdue and were classified. At the end of 2015, the number of loans recorded in the Credit Registry was 2,455,043 loans to individuals and 151,880 loans to legal persons, totaling 2,606,923 loans.

Number of loans in 2014-2015



Source: Central Bank of Armenia.

⁵⁵ The statistical information provided includes the CDA's SSS-executed transfers both with corporate bonds and Eurobonds issued on the name of RA and government bonds held as sub-custodian.

Number of loans registered in the Credit Registry as of end 2015

Number of loans	Outstanding	Repaid	Total
Loans to individuals	639,822	1,815,221	2,455,043
Loans to legal persons	16,929	134,951	151,880
Total	656,751	1,950,172	2,606,923

As compared to the previous year, the total number of loans registered in the Credit Registry increased by 453,883 loans. In the previous year, the Credit Registry possessed information on 448,549 loans outstanding, while this year there was information on 300,735 loans.

A number of methodical and software updates were completed. In particular, the Credit Registry has discontinued providing data to banks and credit organizations on the creditworthiness of the customers for their ongoing monitoring since January 1, 2014. Both natural and legal persons may obtain data from the Credit Registry about their credit history once a year, for free.

In 2016, the new software system will be launched, which will help banks and credit organizations to provide information to ACRA Credit Bureau and Credit Registry in one united report.

The new software system includes new methods for identification of natural and legal entities. Moreover, the restriction on information presented to Credit Registry was renegotiated, so that banks and credit organisations will provide information on their total loan portfolio.

These amendments may lead to a more efficient use of information provided by the Credit Registry for monitoring and analysis.

The ACRA Credit Bureau

In 2015, the number of customers registered with the ACRA Credit bureau has increased by 4.8%, relative to 2014, and amounted to 1,518,579 borrowers as of December 31. Of this number, 98.0 percent are individuals.

The number of loans available in the database has grown by 15.1% and reached 11,467,283, as of December 31, 2015.

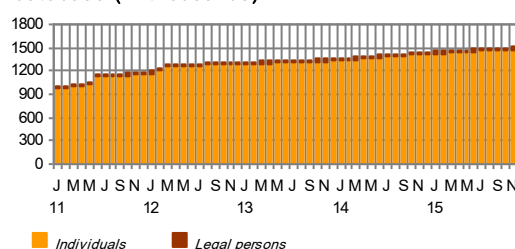
Every natural or legal person may obtain information on their credit history from the Credit bureau. In order to get information on the credit history of one's customer or partner, the legal person should sign a contract with the Credit bureau and obtain the written consent of the owner of credit history.

The Credit bureau has started providing credit reports since April 2007. The number of credit reports provided in 2015 has grown by 7.2 percent compared to the previous year.

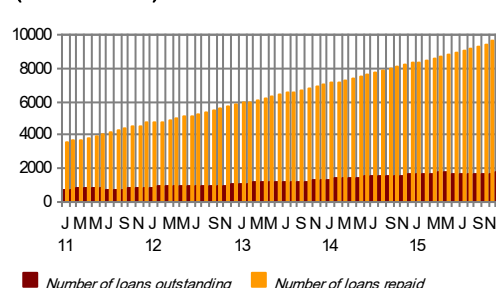
Starting from 2015, the Credit bureau has been cooperating with "E-dram" LLC and "Moby-dram" CJSC. Thus, it is possible to execute online payments for Credit bureau services via POS terminals of the abovementioned companies.

Talks are being held with "ArmenTel" CJSC, a telecommunications service provider, in the field of organizing information circulation. The Credit bureau receives information from such public databases as the Ministry of Labor and Social

Number of borrowers registered in ACRA database (in thousands)

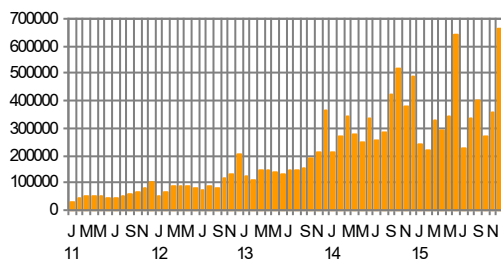


Number of loans registered in ACRA database (in thousands)



Source: ACRA Credit Bureau.

Number of reports provided by ACRA credit registry



Source: ACRA Credit Bureau.

Issues and the Traffic Police Service of the Republic of Armenia Police on unpaid fines within 60 days (calculated from the next day after the last date specified to pay the penalty as prescribed by the legislation of Armenia). Negotiations between the Credit bureau and the RA Ministry of Finance concerning obtaining information on tax liabilities non-performed in a duly established timeframe are underway.

A multi-level coding system has been developed to protect information owned by the Credit bureau and to prevent its illegal usage by third parties whatever. The system traces all actions, as well as an ongoing monitoring of the system is in place to prevent suspicious and unauthorized action.

SUMMARY

The results of monitoring assure that credit and liquidity risks are minimized in the EPS. The system capacity is sufficient and ensures the continuity of payments during the day. No operational risks were recorded in the system; the operational availability of the system was maintained on an internationally accepted level.

Overall, the EPS and GSASS functioning are assessed satisfactory enough; the developments in the payment and settlement system are manageable in terms of financial stability and no risks exposed to the system arise.

During 2015, an increase of loans registered with the Credit Registry of the Central bank of Armenia and ACRA Credit bureau was registered, along with development of united reporting form and increased efficiency of general performance.

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GLOSSARY OF TERMS

Economic growth	The growth of volume of goods and services produced in the economy during a certain period of time.
Inflation	An increase in the general level of prices of goods and services.
Gross value added	Is calculated according to economic activity as a difference between output and intermediate consumption of goods and services. The expression “gross” shows that the figure includes the value of fixed capital consumed during the production process.
Consumer price index	An index of the variation in prices paid by typical consumers for retail goods and other items. The consumer price index measures the changes in the price of a market basket of consumer goods and services purchased by households.
Balance of payments	A system of recording of all economic transactions of Armenia (residents and non-residents) with the rest of the world over a reporting period (a quarter, a year).
Foreign trade	This involves an exchange of capital, goods and services across international borders or territories, in the form of exports and imports.
Real export and import	Is a nominal value adjusted by respective import and export prices.
Gross external debt	Gross external debt, at any given time, is the outstanding amount of those actual current, and not contingent, liabilities that require payment(s) of principal and/or interest by the debtor at some point(s) in the future and that are owed to nonresidents by residents of an economy.
Credit risk	Credit risk refers to the risk that a borrower will default on any type of debt by failing to make payments which it is obligated to do. The risk is primarily that of the lender and includes the lost principal and interest, disruption to cash flows and increased collection costs.
Liquidity risk	Liquidity risk is the risk that a given security or asset cannot be traded by the financial institution quickly enough in the market to prevent a loss (or make the required profit).
Foreign currency risk	Foreign currency risk is the risk that a change in exchange rate in the market will adversely affect profits and/or capital of the financial institution.
Interest rate risk	Interest rate risk is the risk that interest rate volatilities in the market will adversely affect profits and/or capital of the financial institution.
Price risk	Price risk is the risk that a change in price of securities in the market or price of similar financial instruments on balance sheets will adversely affect profits and/or capital of the financial institution.
Standard asset	An asset which is serviced under a contract, and is not problematic.
Watched asset	An asset which is serviced under an original contract yet certain circumstances have emerged that may undermine the borrower’s ability to serve that asset.
Substandard asset	An asset the contractual obligations towards which are not performed due to the borrower’s fragile financial standing or inability to repay the debt.
Doubtful asset	An asset the contractual obligations towards which are not performed; it is more problematic, making its collection at the given time very difficult or impossible.
Loss asset	An asset non-collectable and fully impaired uncollectible, so that its recording on the balance sheet is no longer reasonable.
Nonperforming asset	An asset which has been classified by the bank as watched or substandard or doubtful or bad.
Major borrower	A party the risk on which exceeds 5 percent of total capital of the bank.
Major liability	A liability that amounts to 5 percent and more of total liabilities of the financial institution, without regard to affiliation.
Return on assets (RoA)	A ratio of net annual profit to average annual total assets.
Return on equity (RoE)	A ratio of net annual profit to average annual total capital.
Total liquidity	A ratio of high liquid assets to total assets.
Current liquidity	A ratio of high liquid assets to demand liabilities.
Regulatory total capital	The difference between total capital as shown in statement on financial standing and deductions as specified in Central Bank “Regulation 2 on Banks and Banking”.
Capital adequacy	A ratio of regulatory total capital to risk weighted assets.
Leverage	A ratio of total assets to total capital.

Off-balance sheet contingent asset	Off-balance sheet contingent assets include outstanding credit lines, credit cards and overdrafts as well as letters of credit, guarantees and warranties provided.
Net provisioning	The difference between provisions to and recoveries from assets loss reserve fund.
Net foreign currency position	The difference between assets and liabilities in FX assets and local currency assets containing FX risk.
Gross foreign currency position	This position measures the sum of absolute values of positions of various currencies.
The Herfindahl-Hirschman index	This index is defined as the sum of the squares of the market shares. It varies between 0 and 1, characterizing the level of concentration (values near to 0 denote lower concentration).
Economic cost of capital	The difference of the present value of total assets and present value of total liabilities.
Spread	The difference between deposit and credit interest rates

ABBREVIATIONS

CBA	Central Bank of the Republic of Armenia
CDA SSS	Securities Accounting and Settlement System of the Central Depository of Armenia
CIS	Commonwealth of Independent States
CJSC	Close Joint Stock Company
ECB	European Central Bank
EPS	Electronic Payments System
EU	Euro Union
FRS	Federal Reserve System
GDP	Gross Domestic Product
GSASS	Government Securities Accounting and Settlement System
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
LLC	Limited Liability Company
NPL	Non-performing Loans
NSSA	National Statistics Service of Armenia
OPEC	Organization of the Petroleum Exporting Countries
OTC	Over-the-counter
RF	Russian Federation
ROA	Return on assets
ROE	Return on equity
UIPR	Unearned insurance premium reserves
USA	United States of America